15 CENTS A COPY

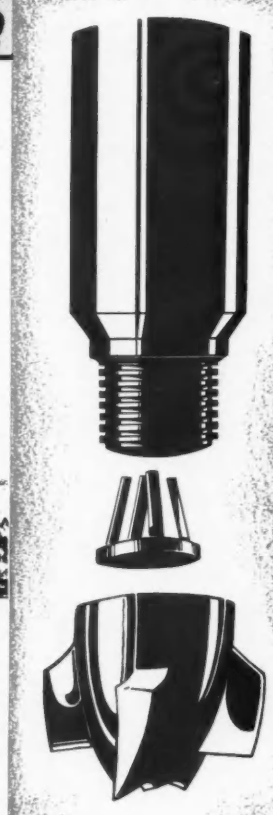
# THE OIL WEEKLY

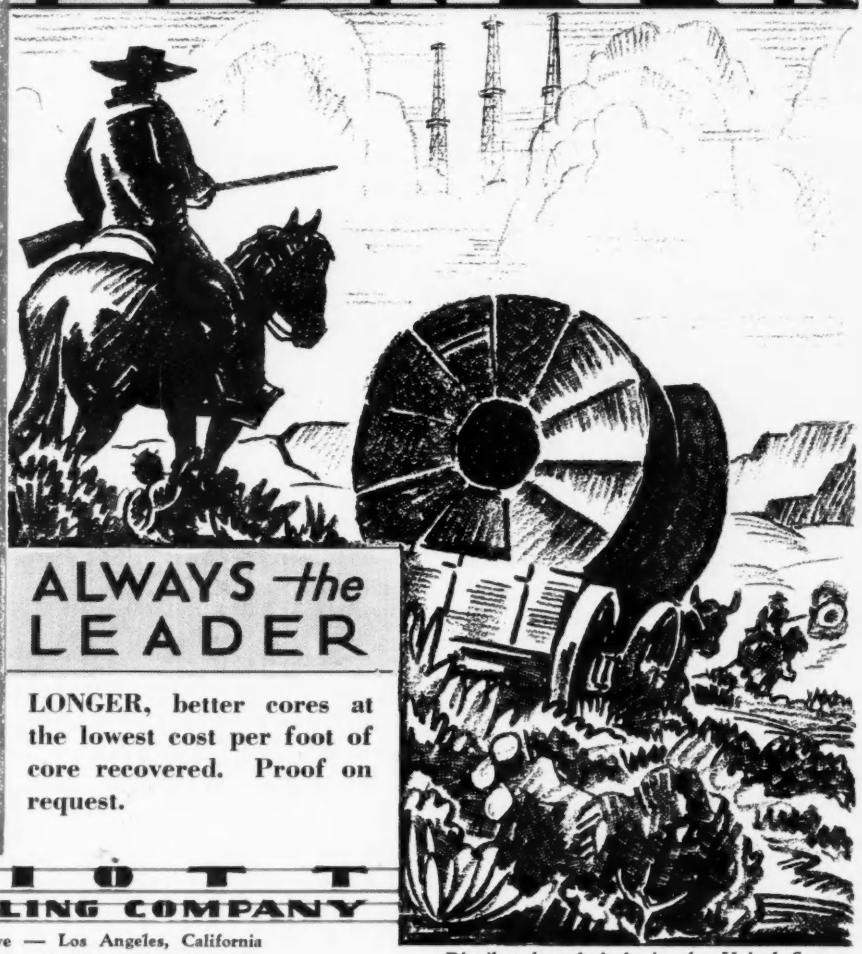
## OIL & GAS ENGINEERING

News Statistics


ELLIOTT

The PIONEER





ALWAYS the LEADER

LONGER, better cores at the lowest cost per foot of core recovered. Proof on request.

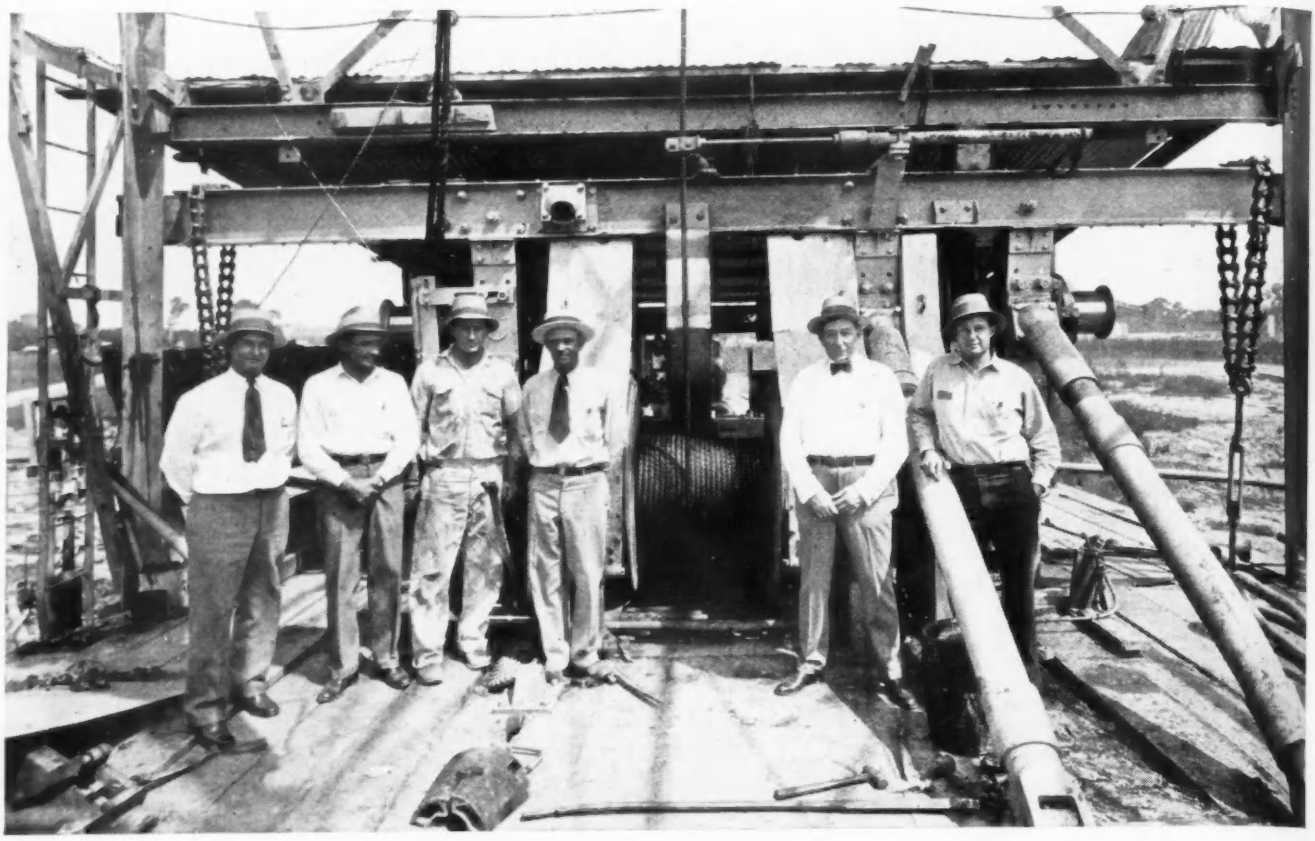
ELLIOTT
CORE DRILLING COMPANY

4731 E. 52nd Drive — Los Angeles, California
*Mailing Address:* Box 55, Maywood, California
*Export Office:* 150 Broadway, New York

Distributed exclusively in the United States East of the Rocky Mountains, by REED ROLLER BIT COMPANY


**April 3, 1931**

ADVERTISERS INDEX, PAGE 106 EDITORIAL INDEX, PAGE 21



# "Union Wire Lines are giving the same satisfactory service in the East Texas Field as at Oklahoma City"

**"Art" Campbell, of the Campbell and Parker Drilling Company, reports that UNION Wire Lines are giving this company the same satisfactory service in the new East Texas Field as at Oklahoma City.**

**The above picture shows Campbell and Parker tearing down and getting ready to bail on the Wirt Franklin Wright No. 2 at Oklahoma City—a well drilled to 6552 feet with UNION Rotary Line. The men, left to right, are: Jas. A. Undercofler, Union Wire Rope Corp.; Dick Barnett, tool pusher; Sandy Cummings, driller; and G. C. Parker, J. A. (Art) Campbell and Glenn A. Campbell, of Campbell and Parker Drilling Company.**

## UNION WIRE ROPE CORPORATION

3 North Madison Avenue, Tulsa, Oklahoma

*Oil Country Sales and Export Office:* 338 Kennedy Bldg., Tulsa

*Branch Office and Warehouse:* Portland, Ore.

PARKER ABBOTT, INC., *Distributor* Mills Bldg., San Francisco, Calif.

*Factory:* 21st and Manchester, Kansas City, Missouri

JARECKI MANUFACTURING COMPANY

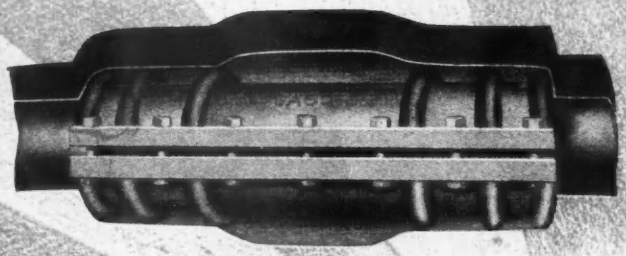
Mid-Continent and Eastern Oil Field Distributors . . . Stocks at All Stores

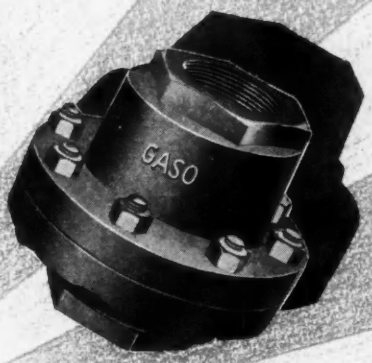
UNION WIRE ROPE CORP

TRADE MARK

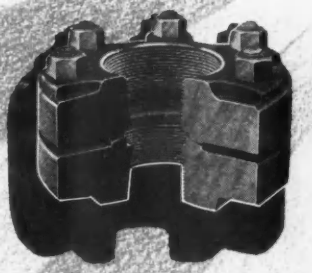
# UNION WIRE LINES

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879






# Fittings



You will find Gaso Fittings unfailingly dependable. They are produced in Gaso shops under Gaso standards of workmanship — made of close-grained iron, free from imperfections, accurately machined and carefully inspected to secure unvarying uniformity.

Ask us about Gaso fittings: Gray Iron Ells and Tees—Heater Heads—Beckwith Swing Check Valves—Pipe Saddles and Clamps—Pipe Line Strainers—River Clamps—Extra Heavy Flanges—Certified Malleable Ground Joint Flange Unions.

• • or get quotations on special requirement fittings created in our modern pattern shop and foundry.

GASO PUMP & BURNER MFG. COMPANY
Tulsa, Oklahoma
Export Office: New York City

# GASO PUMPS

*for every oil industry need*

# Could you use that DERRICK of DRAKE'S?

**In August, 1859,** to the awe and amazement of a doubting world, Colonel Drake, the industry's first really great pioneer, punctured Mother Earth to a depth of sixty-nine feet, and up gushed OIL.

Long dissatisfied with clumsy, inadequate methods of securing surface oils, he had determined to test his theory that *reservoirs* of this precious liquid were waiting to be tapped. His equipment was crude, his methods slow. Little did he realize the greatness of his success!

Under the terrific strain of present-day drilling requirements, Drake's Derrick would tumble like a house of cards. But many of his basic principles still prevail, and are at work throughout the oil fields of the world. From Drake's crude beginnings have come new towers of strength, marvels of convenience, safety, adaptability and durability.

Today you will find Moore Champion Derricks and Moore Challenger Derricks in evidence in every producing field.

**LEE C. MOORE & COMPANY, Inc.**

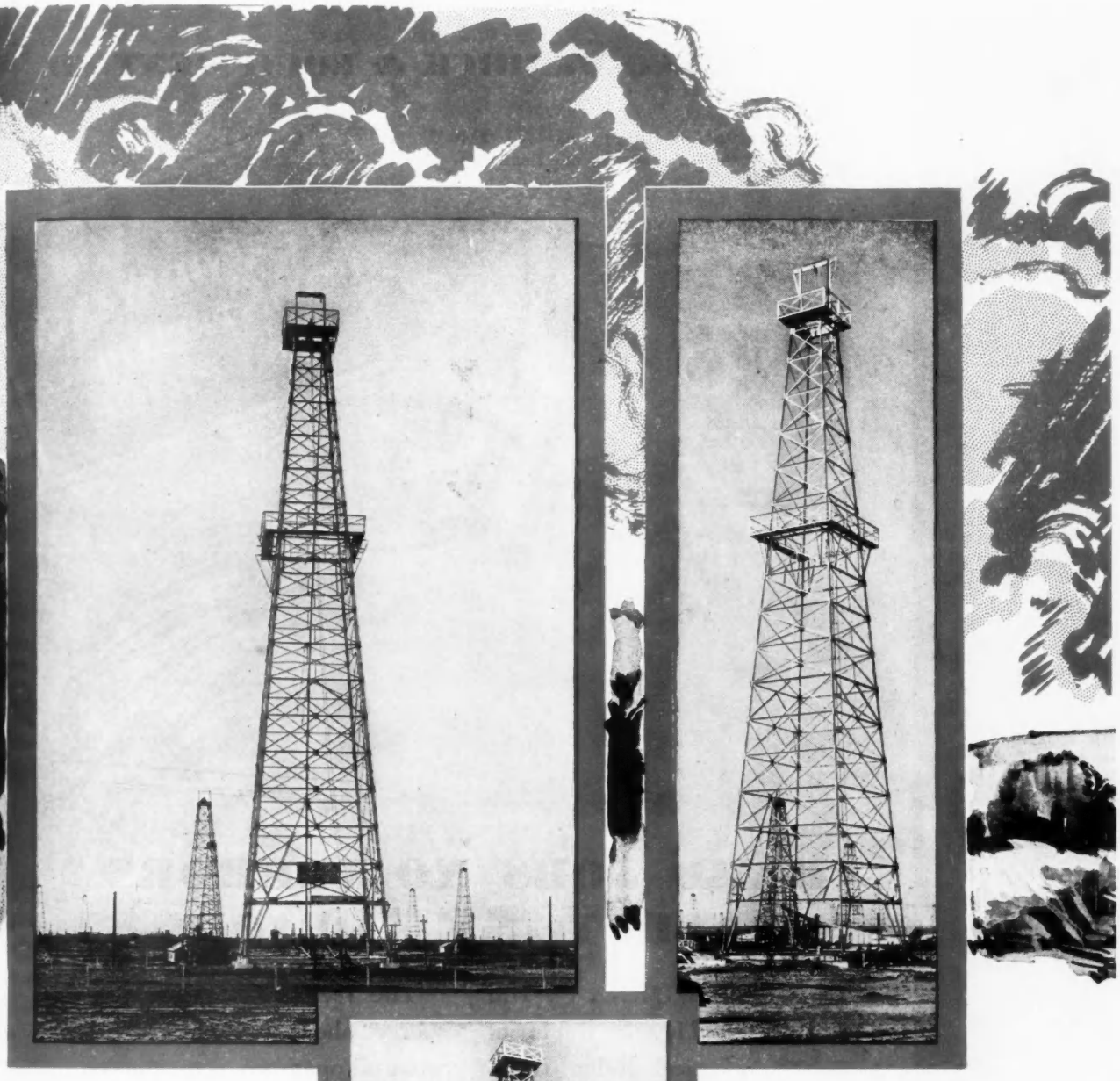
*Established 1907*

**Pittsburgh • Tulsa**

New York Offices: Oilfield Equipment Co., 30 Church Street, New York, N. Y.

Dallas, Tex. Wichita, Kan. Casper, Wyo. Shreveport, La. Houston, Tex.

*Stocks in All Principal Fields*



*Moore Champion 122 foot Derrick, Santa Rita Well No. 2 of the Big Lake Oil Co. This well, 8603 feet deep, is one of nine wells in Big Lake Field all below 8500 feet. These nine Moore Derricks have drilled the world's deepest producers.*

*The University B-3 Well of the Group No. 1 Oil Company drilled to a depth of 8649 feet by this Moore 122 foot Champion Derrick.*

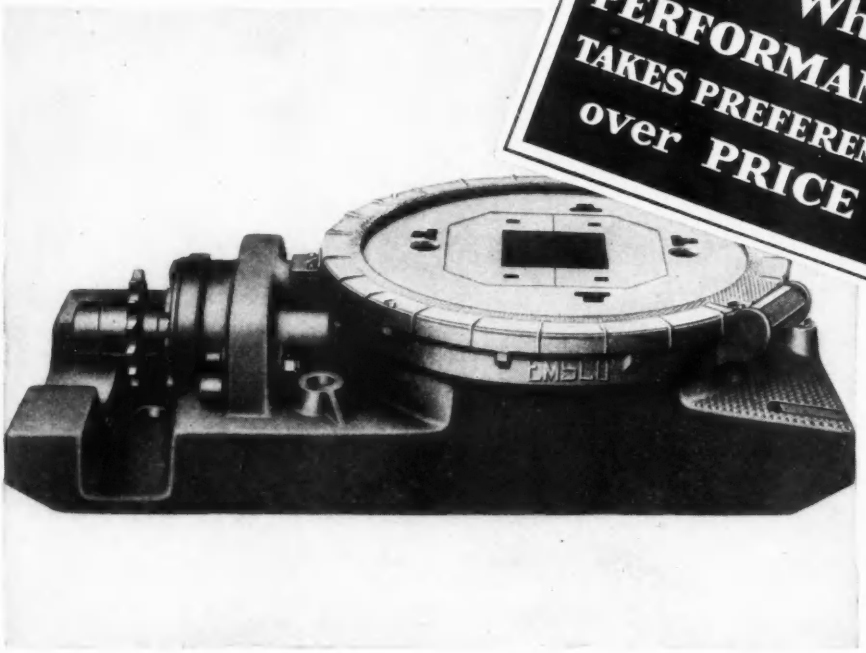
*Test well of the Stanolind Oil Company being drilled by a 94 foot Moore Champion Derrick and type No. 90 Moore Samson Post and Jack Post. This illustration also shows Moore D-W Walking Beam, type No. 30 Pitman and OCS chain-driven Sand Reel. Present plans are to drill to a depth of 8000 feet, unless production is secured at a lesser depth.*

# Moore Champion DERRICK

## EMSCO DERRICK & EQUIPMENT CO.

*Another prominent user of* **SKF** *Bearings in the Oil Industry*

**Where PERFORMANCE TAKES PREFERENCE over PRICE**



# HARD JOBS NO TERRORS FOR BRUTE SKF BEARINGS

TOUGH WORK . . . and plenty of it . . . is the lot of SKF Spherical Roller Bearings on the pinion shaft of the EMSCO totally enclosed rotary. Twenty-four-hour dependability is the only thing that counts here . . . and with EMSCO, SKF Performance takes Preference over Price.

The feeling that you can "forget about the bearings," is what oil operators want on the job. And SKF Spherical Roller Bearings give the answer 100 percent. They stand the gaff, run easily . . . never require adjustments. Yes . . . SKF's thrive on the brute assignments of the oil industry . . . with very little attention.

**SKF INDUSTRIES, INC., 40 East 34th Street, New York, N. Y.**

2697

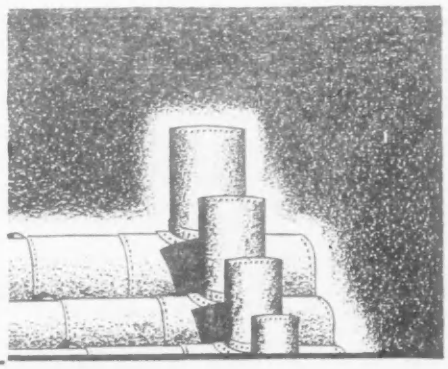
# SKF

# FARRAR & TREFTS

# BOILERS

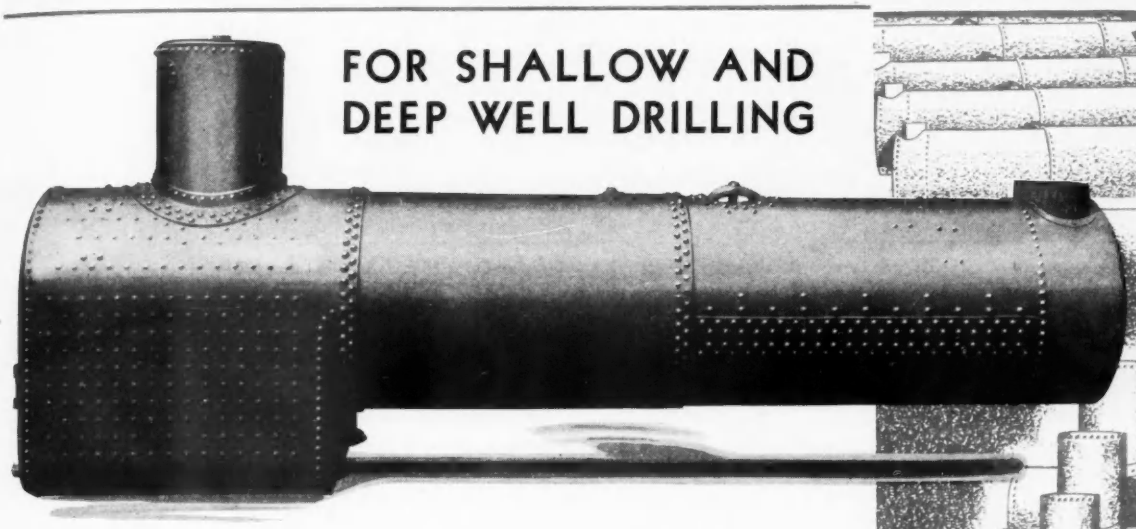
Manufactured for

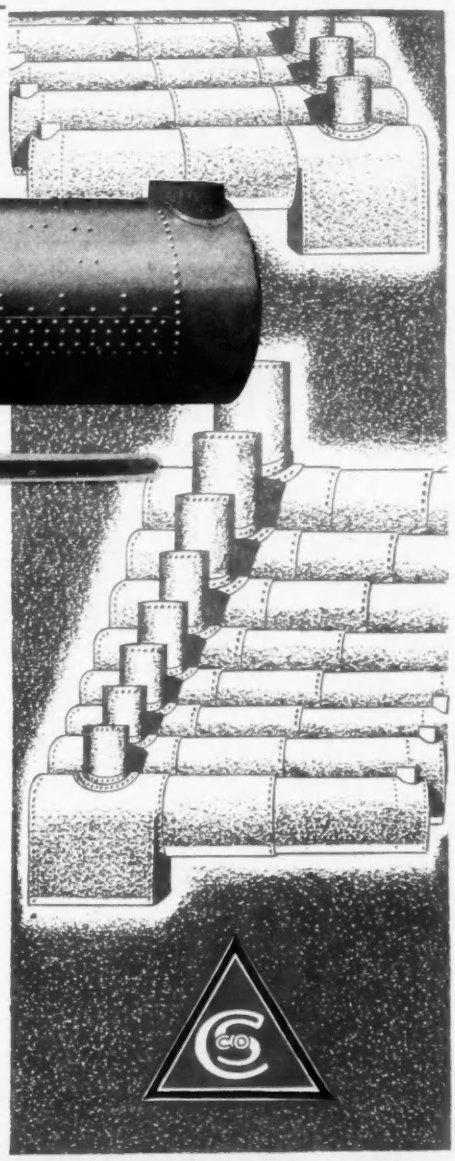
## The Continental Supply Company



## A RANGE OF SIZES

FOR SHALLOW AND DEEP WELL DRILLING





| Horse Power | Working Pressure |
|---|---|
| 75 | 200 |
| 85 | 200 |
| 100 | 200 |
| 75 | 250 |
| 85 | 250 |
| 100 | 250 |
| 125 | 250 |
| 125 | 300 |

*"If Continental Sells It....There Is No Better"*

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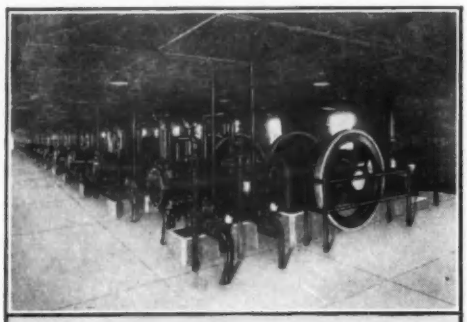
Export Offices: CONTINENTAL EMSCO CO., INC.
74 Trinity Pl., New York
London Offices: 316-17 Dashwood House, Old Broad St., E. C. 2

CONTINENTAL EMSCO S. A. R.
7, Strada Eminescu, Ploesti, Romania

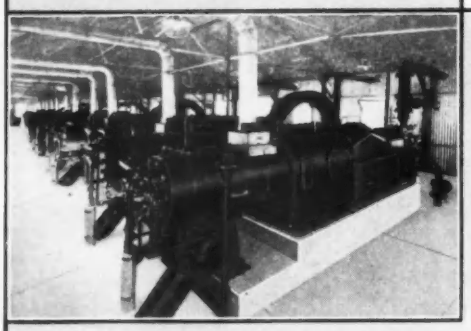
CFT-1

# CONTINENTAL

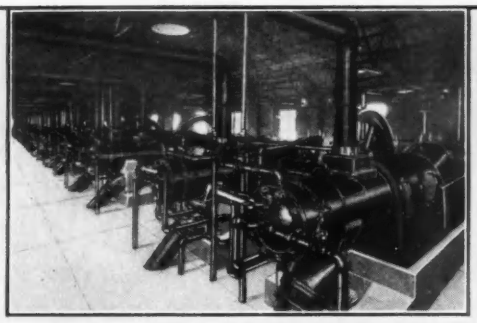


Oklahoma City plant with 100 H. P. Clarks

# 13,300 h.p. at Oklaho



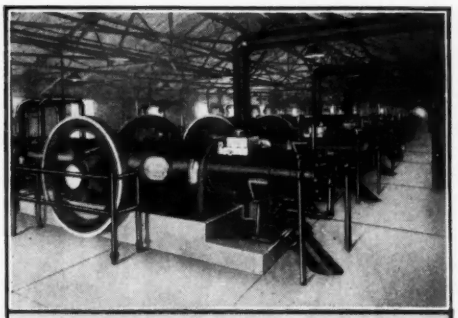
200 H. P. Clark "Super 2" twins at Oklahoma City



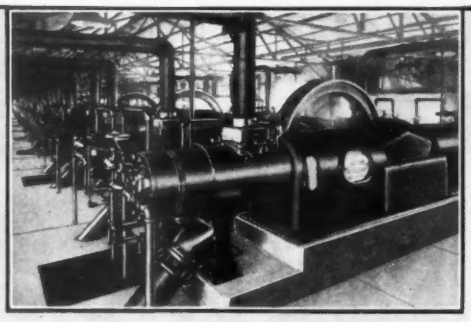
Sixteen Clark 200s and three Clark 100 H. P. "Super 2s"

CLARK

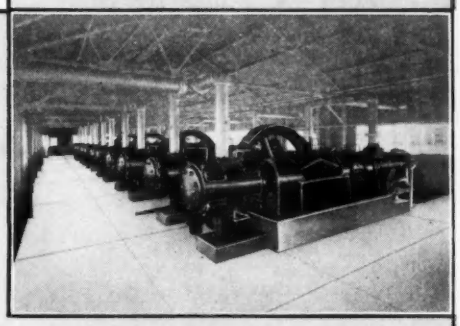
# of CLARKS
# ma City—



Clark 100 H. P. "Super 2s" at Oklahoma City



Fifteen Clark 200 H. P. "Super 2s" and one 100 H. P.



Clark 200 H. P. Twin "Super 2s" in Oklahoma City Plant

The amazing Oklahoma City oil field is featured by enormous potential production, extremely high pressures, deep holes, modern methods — and CLARK Engines.

## CLARK BROS. COMPANY » » Olean, New York

Export Office: 150 Broadway, New York City

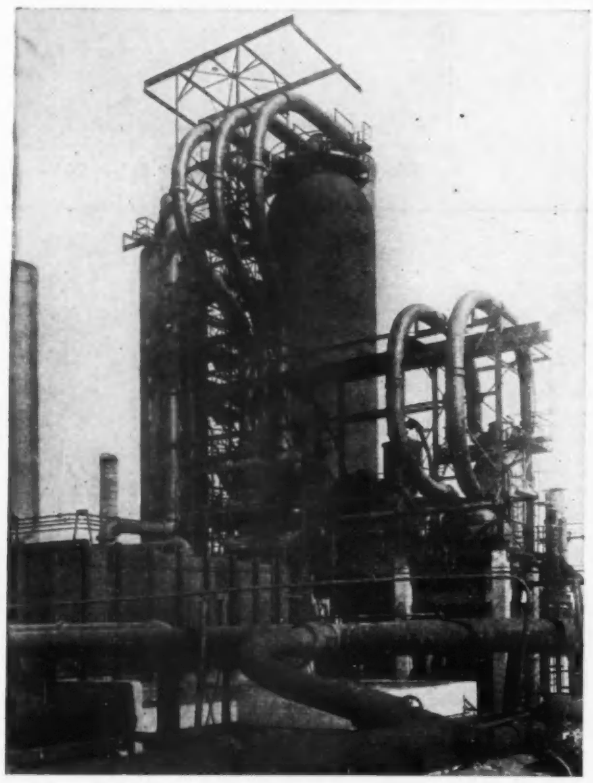
Warehouses: Tulsa; McCamey and Sweetwater, Texas; Artesia, New Mexico.

Mid-Continent Sales Offices: Tulsa, Oklahoma; Houston, Texas.

California: Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles.

GULF

Modern Methods Make Modern Gulf Products



the largest Atmospheric-Vacuum Still ever built.

Paraffine and Coastal Crudes

Gasoline · Lubricating Oils

Naphtha · Gas · Oils

Wax · Petroleum Coke

Cylinder · Engine · Cordage

GULF REFINING COMPANY

*General Sales Offices:* PITTSBURGH, PA.

# INVESTMENT!

★ ★ ★

**A pipe line is truly an investment of major importance. The engineering design and the selection of the proper kinds of pipe to meet the varying soil conditions determines the yearly cost. "Pipe prescription" crystallizes the knowledge of what certain piping materials have done under certain operating conditions and applies those facts toward the lowering of yearly operating cost.**

**Although more than one kind of pipe may be required to create a balanced**

## BYERS • GENUINE • WROUGHT-IRON PIPE

BYERS • GENUINE • WROUGHT-IRON PIPE

**pipe line, due to widely varying soil conditions, Byers Genuine Wrought-Iron Pipe has a very definite place where corrosion is a major operating problem.**

**Let us help you in applying "pipe prescription" in a practical way to your "hot spot" problems. There must be a good reason why Byers has been recognized as a standard of wrought iron quality for almost three-quarters of a century. A. M. Byers Company, Pittsburgh, Pennsylvania. Established 1864.**

## AN INVESTMENT – NOT AN OUTLAY

# Built to Stand The Gaff

TOWERING into the skies, fearlessly facing the forces of storms and winds, Parkersburg Derricks stand unflinching.

Beginning with the Steel—of Superior Quality, better fabrication of each member, the faultless fitting of parts, the strict conformance to A. P. I. Standards—these give additional strength and safety to Parkersburg Derricks and confidence to the men working under them.

The strength of any derrick depends largely upon the security of its joints. Parkersburg patented slot-bolt construction, which reduces the possibility of loose joints fully 50 per cent, is a vital feature which speeds erection and assures ultimate economy in Parkersburg Derricks.

Perfect butt-to-butt contact of each assembled derrick leg member produces the effect of a single, continuous column of steel, safely distributing the load straight down the legs, eliminating shear strain on the bolts.

There's a Parkersburg Quality Derrick in a size and type for every well. Let our nearest Representative tell you the full story of how Parkersburg Derricks are standing the gaff in oil fields around the world. Write for detailed data and descriptions.

THE PARKERSBURG RIG AND REEL CO.
PARKERSBURG WEST VIRGINIA
MADE IN U.S.A.

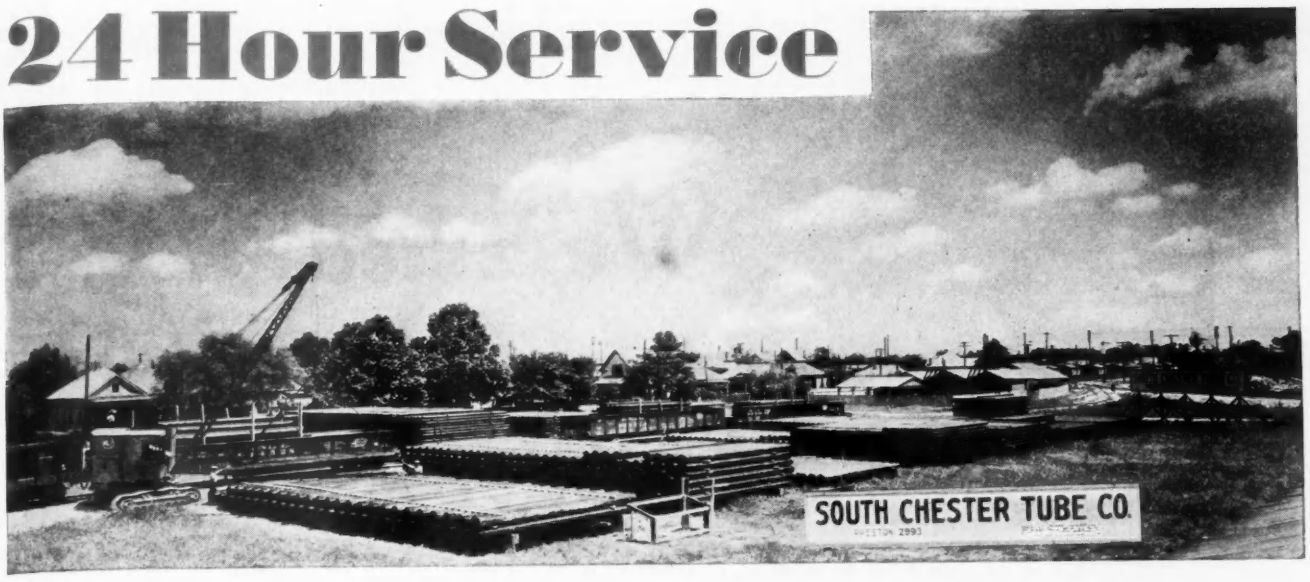
TRADE MARK REG.

This Seal of Quality and Service on Parkersburg Equipment is Your Guarantee.

We Subscribe to A.P.I. Standards.

FROM DERRICKS TO TANKS
QUALITY AND SERVICE
THE PARKERSBURG RIG AND REEL CO.
PARKERSBURG, W. VA.
NEW YORK • TULSA • FT. WORTH • HOUSTON
BRANCHES IN ACTIVE FIELDS
CABLE ADDRESS "PARIGREEL"

# 24 Hour Service




*District Sales Managers:*

J. P. COONEY, 715-716 A. G. Bartlett Bldg., Los Angeles, Calif.

W. E. GIBSON, 801 Columbia Bank Bldg., Pittsburgh, Pa.

H. A. MORSE, 30 Church St., New York City, N. Y.

J. P. STEELE, 305 Petroleum Bldg., Ft. Worth, Texas.

*District Offices:*

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*District Warehouses:* Houston, Tex.; Thenard, Calif.; 180 Townsend St., San Francisco, Calif.

*Distributors:*

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PRICHARD SUPPLY CO., Mannington, W. Va.; Mather and Waynesburg, Pa.

LeVALLEY, McLEOD, KINKAID CO., INC., Elmira and Olean, N. Y.

KANE SUPPLY CO., Kane, Lawrenceville, Brookville, Pa.

PELICAN WELL TOOL & SUPPLY CO., Shreveport, La.

UNITED OIL WELL SUPPLY CO., 712 A. G. Bartlett Bldg., Los Angeles, Calif.

GREAT NORTHERN TOOL & SUPPLY CO., Billings & Kevin, Mont.; Kemmerer and Cody, Wyo.

**For over thirty years, we have always aimed to produce line pipe and casing of the highest quality and workmanship—and at the same time maintain the quickest and best service possible to every customer. Our distribution centers are strategically located throughout the oil and gas fields of the United States.**

*Chester also makes all classes of Genuine Wrought Iron Tubular Goods and Copper Bearing Steel Pipe.*

## South Chester Tube Company

**Chester, Pa.**

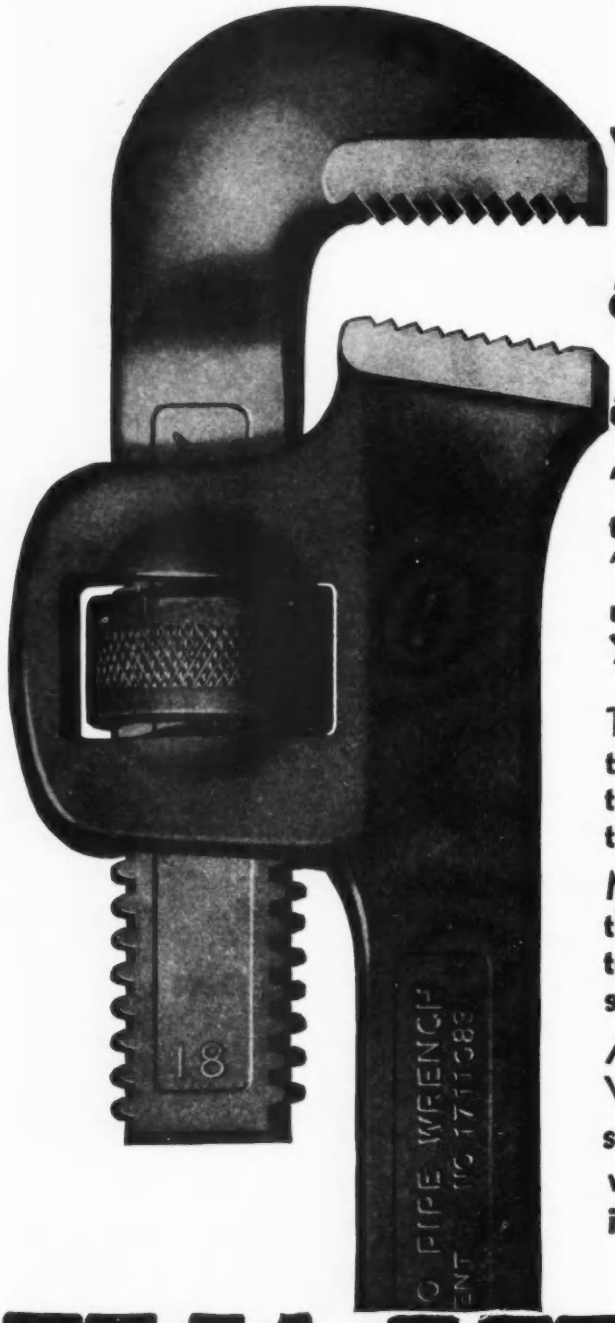
# CHESTER

SPECIALISTS IN CASING FOR DEEP WELL DRILLING

STEEL CASING

LINE PIPE

# The New Walco Pipe Wrench




## We asked 37,000 about the Walco

## and here is what THEY said:

"All O. K." "An A-1 wrench." "A jewel all through." "The last word in wrenches of its type." "Made by Walworth is the strongest feature with us." "We were favorable to the . . . . . Wrench. Your Walco has it beat."

• • • •

These were some of the general comments from the thousands of wrench buyers and (still more important) wrench *USERS* whom we asked to tell us how they liked the new Walco pipe wrench.

Many of them were especially enthusiastic about the solid drop-forging of the entire bar and the protection it affords to prevent the nut from being smashed out of round.

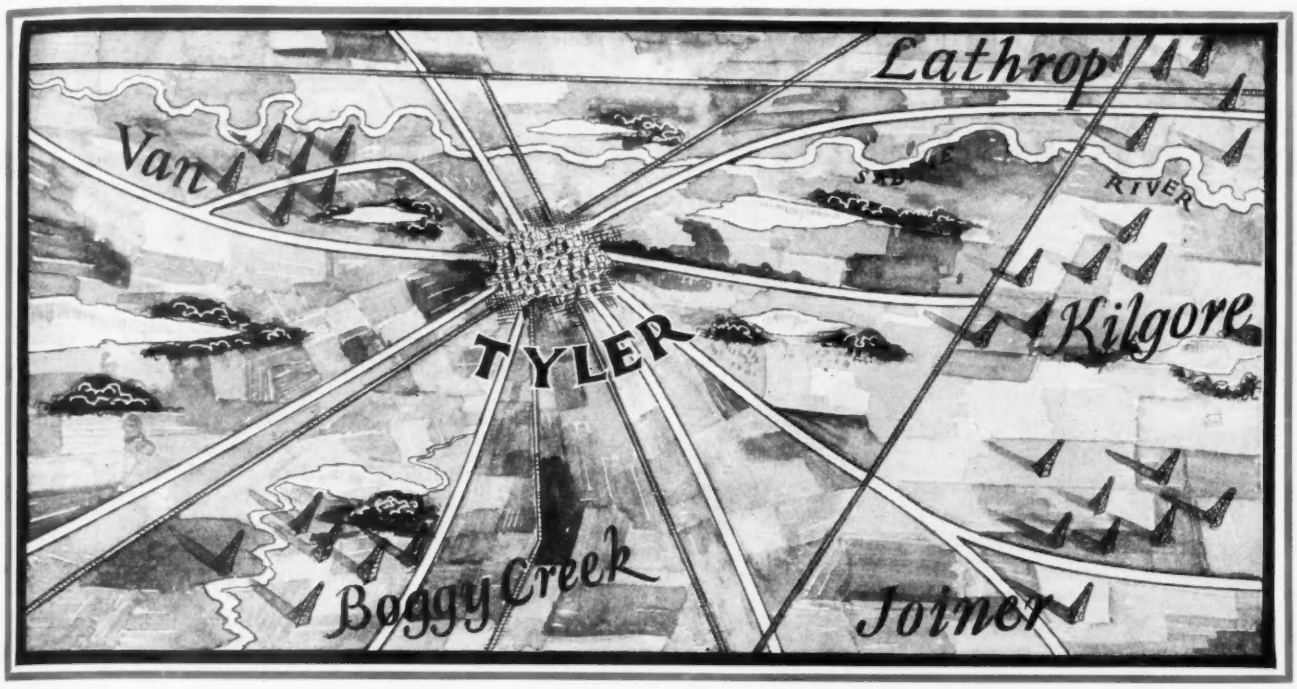
Ask any one who has already switched to the Walco and he will tell you pretty much the same story,—that in this "simplest and strongest of pipe wrenches" we have "handed the trade a real working tool" . . . "as good a wrench as can be made."

# WALWORTH

Walworth Company, General Sales Offices: 60 East 42nd St., New York
Walworth Company Limited, 660 St. Catherine Street West, Montreal, P. Q.
Walworth International Co., 11 Broadway, New York, Foreign Representative
. . . Distributors in Principal Cities of the World . . .

VALVES FITTINGS AND TOOLS

THE SIMPLEST, STRONGEST PIPE WRENCH MADE




# When You Come To East Texas—Come To

# TYLER

## THE HEART OF EAST TEXAS

"Of course I'm living in Tyler," oil men in East Texas are saying . . . "Of course we have opened offices in Tyler . . . *of course* we are conducting our oil field business from Tyler, the capital!" So a hundred companies, newly arrived in the greatest of all regions of oil activity, will tell you. And, "Why should we go farther away when right here in the heart of the new oil fields there's a live city that offers everything a city can offer —*everything!*"

Tyler's paved highways to the oil fields . . . her splendid banks . . . her railroads and huge freight yards . . . her $60,000 airport . . . her excellent government, economical utilities . . . such advantages right in the heart of the oil fields are immensely worth while.

## *America's New Oil Capital*

A ring of five great oil fields surrounds Tyler. The Lathrop pool is less than 35 miles away; Kilgore only 26 miles; Joiner 28 miles; Boggy Creek 28 and Van 26 miles.

Tyler is the focal point of paved highways, railways and air routes for all this territory.

Tyler has *always* been East Texas' industrial center — financial center — commercial center. But *during the next ten years this city may double in size.* More than a million dollars' worth of construction is now under way or definitely projected.

Those who invest today in Tyler real estate, in Tyler building enterprises, in Tyler industries, will realize such enhancement as only a city of immense potentialities can promise.

Through her Chamber of Commerce Tyler's 25,000 people extend you a cordial welcome. We have a new booklet, crowded with things you'll want to know about Tyler, ready to mail upon receipt of your name and address. *Mail the coupon now!*

*Clip and Mail*

TYLER CHAMBER OF COMMERCE, Tyler, Texas. Mail a copy of the Tyler Booklet to

*Name*..... *Address*.....

# LUFKIN *Slide Base* UNIT

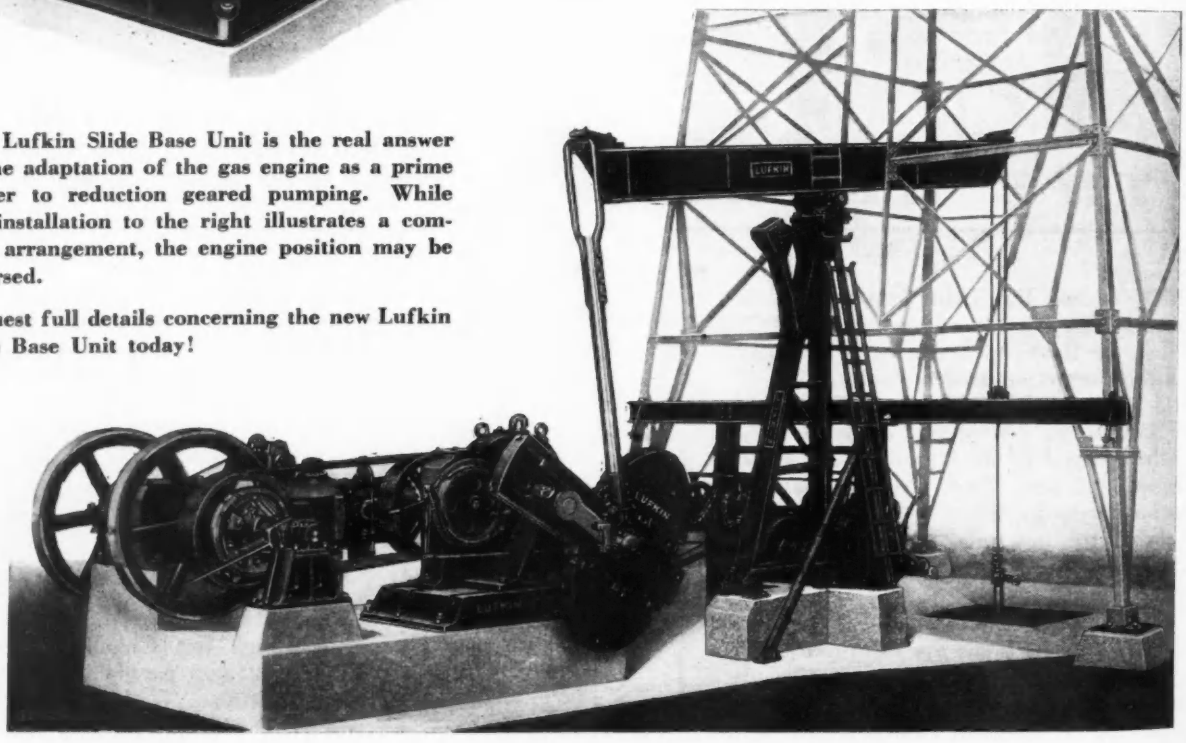
## Is the Ideal Gas Engine Hook-Up

**Designed to meet the need for a reduction geared Unit, adaptable particularly for single, or multi-cylinder gas engine drive, the new LUFKIN SLIDE BASE HERRINGBONE UNIT, has met with instant approval. This new Unit is mounted upon a "slide base" provided with "ways" to permit easy sliding. A "guide key" eliminates misalignment when taking up slack in "V" belts.**

**Expensive reverse clutches and impractical tighteners are eliminated in this new drive. "V" pulleys and belts with clutch and extension shafts are furnished to fit any size and make of engine.**

**The Lufkin Slide Base Unit is the real answer to the adaptation of the gas engine as a prime mover to reduction geared pumping. While the installation to the right illustrates a compact arrangement, the engine position may be reversed.**

**Request full details concerning the new Lufkin Slide Base Unit today!**



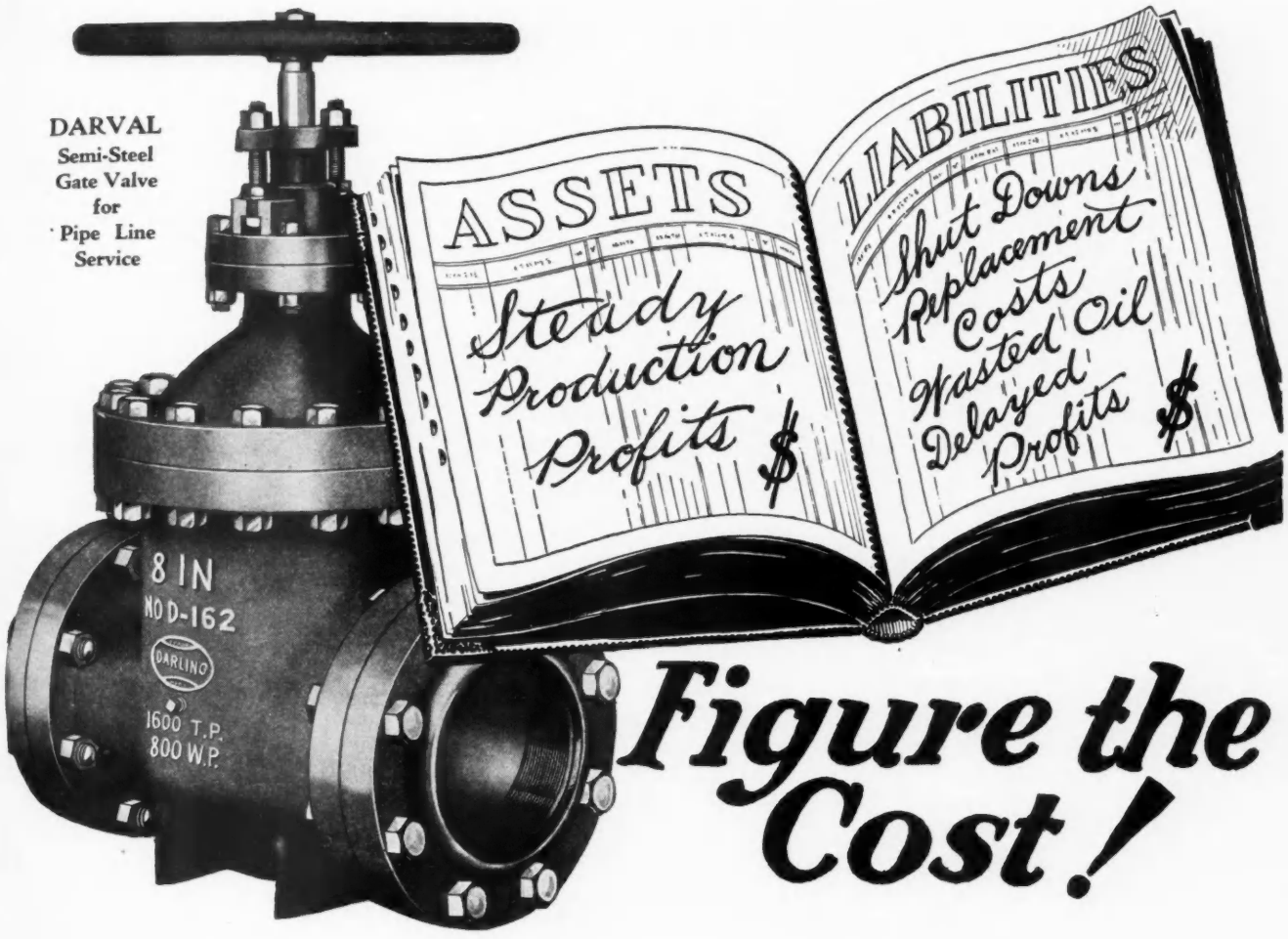
LUFKIN FOUNDRY & MACHINE COMPANY, Lufkin, Texas

*Manufacturers* of LUFKIN WORM GEAR and HERRINGBONE UNITS, CENTRAL POWERS, HOISTS, WALKING BEAMS, PITMANS and SAMSON POSTS

*Branch Offices*

HOUSTON TULSA LOS ANGELES NEW YORK

ODESSA EL DORADO TYLER LONGVIEW SEMINOLE BAKERSFIELD




# *Figure the Cost!*

**The valves you put into your line are either with you or against you. They either speed up operations or eat up profits. Many an operator is on the wrong side of the ledger because he has failed to take into account the differences in valves.**

**Consider the strength of Darval Semi-Steel valves. Examine their construction and note how simply and soundly they have been designed to guard against wear, binding, bending, or breaking.**

**They are bronze mounted with renewable bronze seat rings. Also furnished with solid semi-steel seats. Either bronze or steel stem provided. Made in all sizes and for all pressures.**

*Write for further description.*

**DARLING VALVE & MANUFACTURING COMPANY**
**WILLIAMSPORT, PA.**

NEW YORK LOS ANGELES OKLAHOMA CITY HOUSTON

*Mid-Continent Distributors:*
Frick-Reid Supply Corp. International Supply Co.

*Foreign Sales Manager:*
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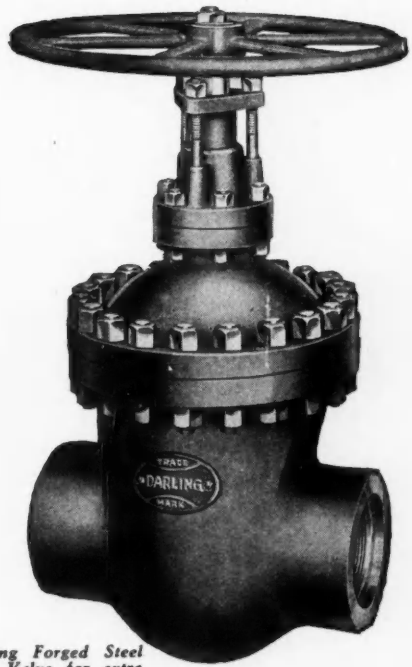


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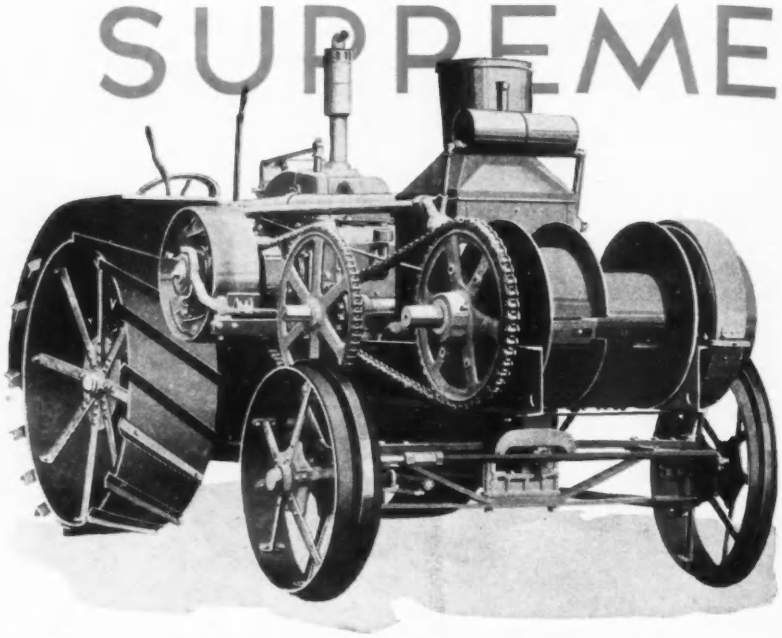

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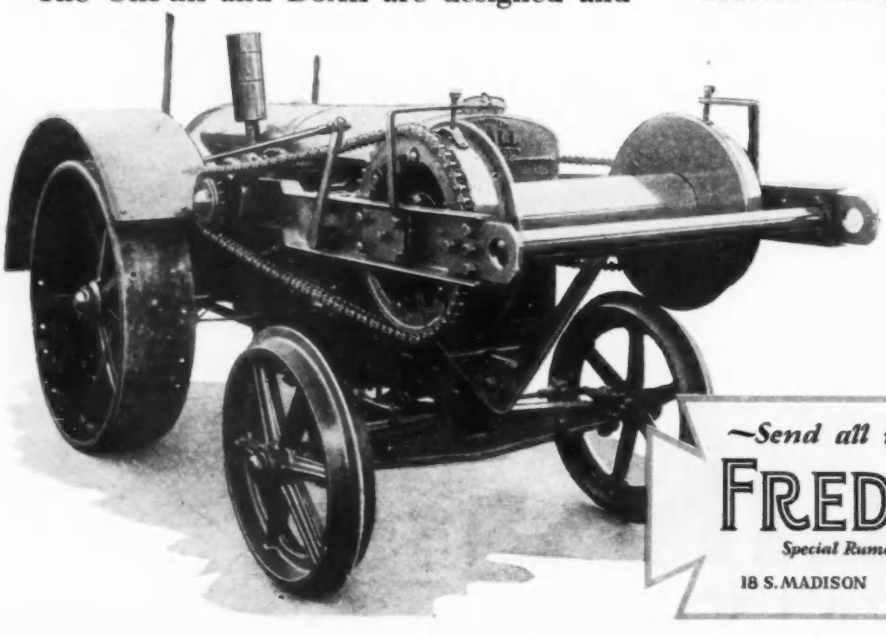

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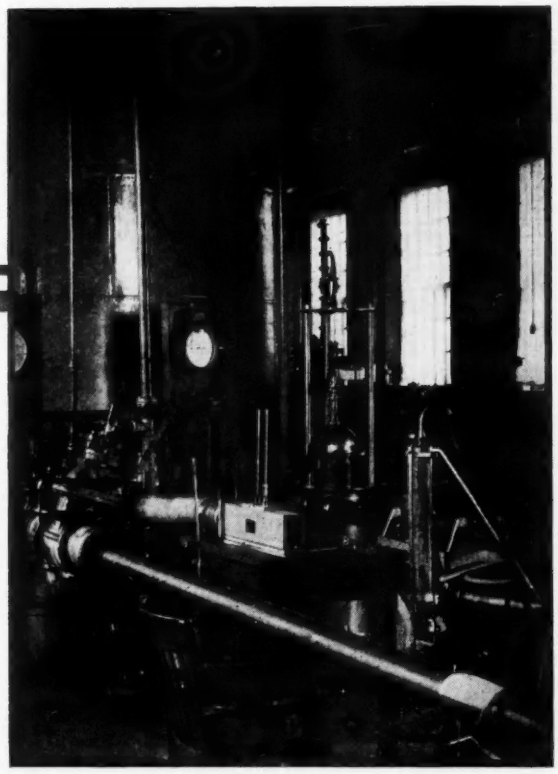

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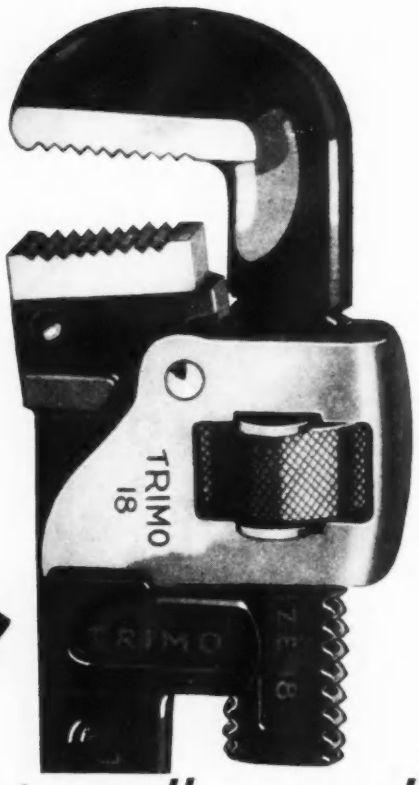


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# THE OIL WEEKLY

APRIL 3, 1931
Vol. 61, No. 3

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*Editor*

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HOUSTON, TEXAS

## CONTENTS

### *Special Features*

Drilling at Low Ebb in Venezuela ..... 23
*By Roy E. Leigh*

Open Flow Test of California Might Help Hopeless Situation .... 24
*By Brad Mills*

Well Pressure Furnishes Power for Snubbing Tubing ..... 26
*By Jack Logan*

Economic Field Methods Suggested by Engineers Offer Means of Correcting Some Operating Evils ..... 30
*By Floyd Swindell*

Some Economic Aspects of Oil Production Methods ..... 32
*By H. M. Stalcup*

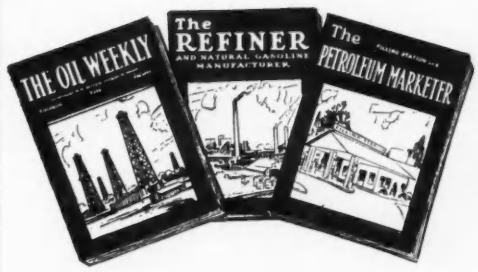
On and Off the Dome at Kettleman Hills ..... 36
*By Stanley C. Herold*

Device Lowers Cost of Treating Oklahoma City Cut Oil ..... 44
*By R. T. Baker*

Use Steel Square for Finding Length of Belt ..... 46
*By W. F. Schophorst*

### *Regular Departments*

Advertisers' Index ..... 106
Markets-Production-Crude Prices ..... 51
United States Production Estimates ..... 54
Crude Oil Price Quotations ..... 57
Personal Mention ..... 59
World Petroleum in Review ..... 48
Completions for Past Week in All U. S. Fields ..... 85
Permits for New Wells ..... 86
Wildcat Drilling Reports from All Important Areas ..... 88
News from California Fields ..... 67
Oklahoma-Kansas Field Notes ..... 70
Gulf Coast Field Developments ..... 81
North and West Texas Field Notes ..... 73
East Central Texas Fields ..... 75
South Texas Field Developments ..... 79
New Mexico and Rocky Mountain Area ..... 74
Louisiana-Arkansas Development Notes ..... 83
Mississippi News Notes ..... 84
New Equipment, Catalogs, Bulletins, Books ..... 101
Manufacturer and Supply Dealer Notes ..... 102
Squeaks from the Bull Wheel ..... 104




SPECIALIZED OIL JOURNALS
*Published by*
THE GULF PUBLISHING COMPANY

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TULSA: 913-916 Hunt Building, J. F. Carter, Jr., Manager.

FORT WORTH: 203 W. T. Waggoner Building, H. H. King, Manager.

Issued Friday of each week. Single copies 15 cents. Subscription price: Domestic $1.00 a year, Foreign $1.00 a year. Subscription restricted to those engaged in the producing and pipe line branches of the oil business or the manufacture and distribution of oil field supplies. Advertising rates on application.

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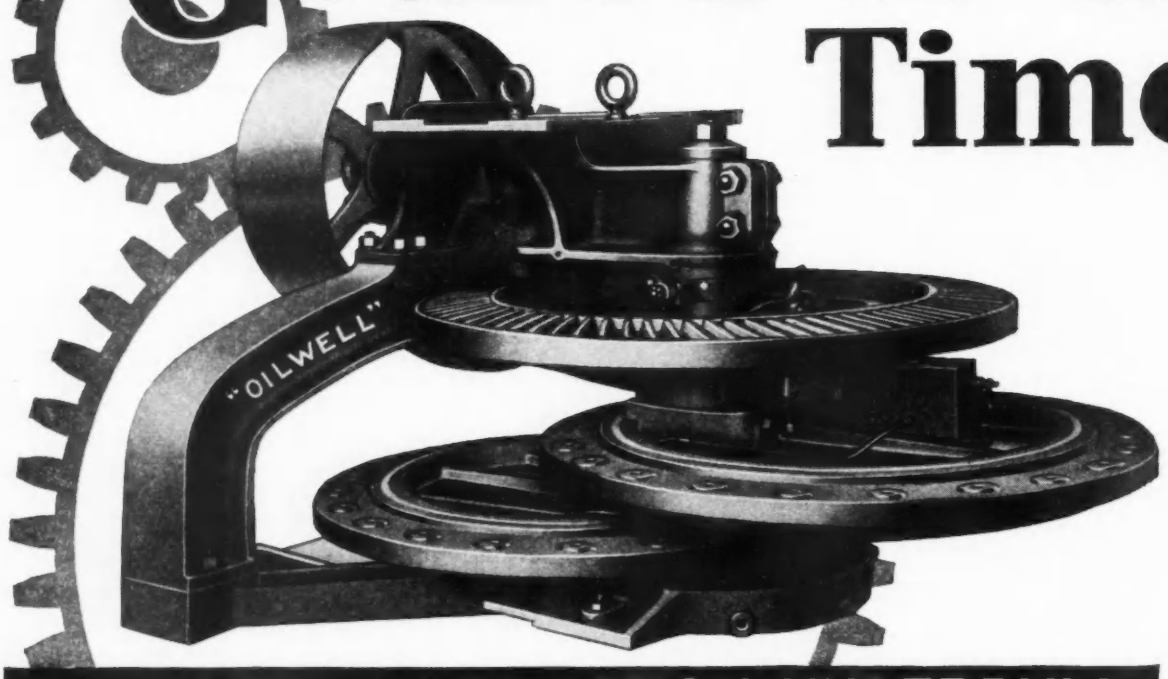


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# "OILWELL"

THE OIL WEEKLY

VOLUME 61, NO. 3 APRIL 3, 1931

# Drilling At Low Ebb In Venezuela

By ROY E. LEIGH
*Associate Editor*

RECENT reports from Maracaibo indicate that drilling activity in Venezuela has been reduced to less than 25 per cent of normal. Heretofore, it has been the practice of the companies represented in Venezuela to operate a total of 100 to 125 rigs; but the curtailment of drilling has brought this total down to the lowest figure since the commencement of the Maracaibo boom.

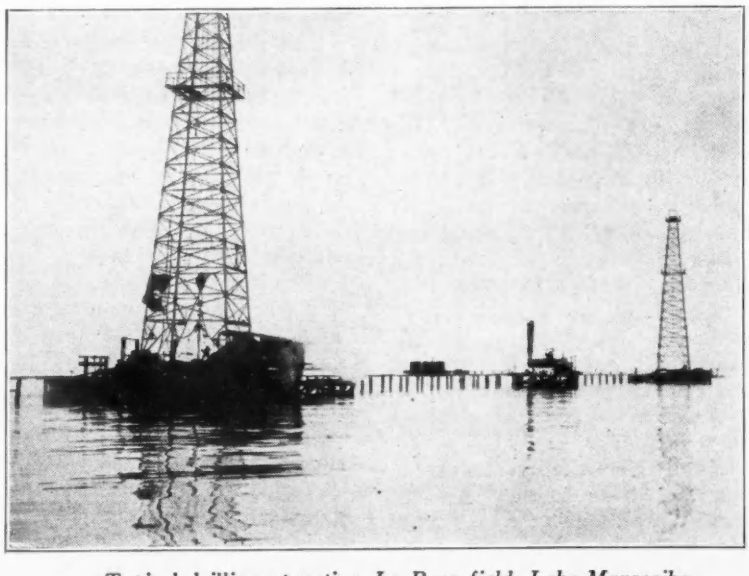
Lago Petroleum Corporation, which operated from 10 to 17 outfits during 1928 and 1929, has suspended all drilling activity and is now employing only two clean-out crews. The Shell subsidiaries, including the Caribbean, Venezuelan Oil Concessions, and Colon companies, which formerly operated more than 30 rigs, are now running only about 12 altogether. Venezuela Gulf, which formerly employed about two dozen rigs, has shut down all but five. British Controlled Oilfields, whose custom it was to operate eight rigs continuously on the Buchivacoa Concession, has restricted drilling by 50 per cent. Richmond Petroleum Company of Venezuela (Standard Oil Company of California), owner of an undeveloped field at Urumaco, northeast of Maracaibo Lake, has likewise curtailed its activity by more than 50 per cent.

Creole Petroleum Corporation, controlled by Standard Oil Company of New Jersey, has shifted practically all of its operations from the Maracaibo Basin to eastern Venezuela, where export shipments were commenced during 1930 from its new field at Quirequire. This company is operating five drilling rigs in the latter district; but its activities in western Venezuela have been restricted to one rig employed in wildcat prospecting in the District of Perija, west of the lake.

The Shell subsidiaries have announced a reduction in drillers' wages, from $365 to $300 per month. So far, the other companies have made no changes in rates of pay, although hundreds of men have been laid off and sent home.

Crude oil production and export shipments, which were maintained at about maximum tanker capacity during 1930, began to show a slight decline during last month. Venezuela operators, however, claim credit for having done their share toward restriction of production by the drastic curtailment of drilling and by refraining from increasing shipments beyond the averages at which stabilization has been accomplished, as was easily within their power to do merely by the enlargement of their tanker fleets.

West India Oil Company, South American marketing subsidiary of the Standard Oil Company of New Jersey, is said to have made application to the Trinidad government for permission to enlarge and expand its refinery at Point D'Or, Trinidad, off the Venezuelan coast, presumably for the purpose of handling oil produced from the Creole's field at Quirequire, in the District of Marturin, Venezuela. Point D'Or is located near Pitch Lake, on the west coast of the island of Trinidad, a British Crown Colony, and within sight of the Venezuelan mainland. It is reported that the New Jersey company probably intends to develop a refining base on Trinidad similar to those established by Pan American (Standard Oil Company, Indiana) and Shell companies on the Dutch islands of Aruba and Curacao. In addition to political stability, an important point to be considered when planning large plant investments, Trinidad offers the additional advantage of its location within the British preferential tariff wall.



*Typical drilling operation, La Rosa field, Lake Maracaibo*

# Open Flow Test Might Hopeless

By BRAD MILLS
*Staff Representative*

*At Playa del Rey derricks approach very close to the ocean*

"WHAT'S wrong with the oil business in California?"

This question is being asked by oil producers, marketers, refiners and investors alike, but the answer can not be given in a few words. One might say, "Overproduction", and pass on, but such an answer would merely constitute an effort to dodge the real issues involved. As a matter of fact, however, it is difficult to find two competent oil men who agree upon the real reasons back of the present low sentiment—and low prices—but all agree that something is wrong.

The principal question immediately leads to many other questions, such as:

1. Are excess stocks retarding the recovery?
2. Should crude prices have been reduced months, and even years, before they were reduced in California?
3. Should curtailment be discarded in favor of a supply-and-demand, survive-or-perish policy?
4. Will a cessation of drilling correct the oversupply?
5. Are potentials too high, and if so, do these artificial figures weaken the curtailment program?
6. Should a purchasing company buy more oil than it can use within a reasonable length of time?
7. Has the general depression reduced the demand for California petroleum products, especially in foreign countries?

To pose as an economic expert capable of answering all of the above questions would be the height of egotism, but it is not impossible to strike somewhere near the root of the trouble in most instances. Opinions differ sharply all along the line but the fundamental causes can be found.

Perhaps there has been nothing vicious or deliberate in California's gradual decline to a weaker technical and statistical position. Even a glance at the current daily production of crude oil in the state shows that the output could be much larger, and that the statistical position could be much worse. The industry is sick; there is no doubt about that; but with a daily production far below that anticipated when curtailment was started, and with stocks being reduced some, there is still hope that a sounder position will be reached before the end of the year.

Incidents and factors leading up to present conditions are things of the past, but a review should be made to prevent a recurrence or continuation of such unfavorable factors. The trouble in California has been the ignoring of economic fundamentals while building a house upon the sand. The constant thought that over-production would soon "blow over", and the maintenance of a high price schedule in the face of intensive development in fields which should have remained untouched are now being reflected in a demoralized state of affairs.

The question of stocks is a serious one, and quoting from previous issues of THE OIL WEEKLY, one does not find it necessary to treat this subject as a secret any longer. If one goes back from 10 to 15 years, it is possible to start a trail which will ultimately lead to a fair understanding of the present huge surpluses. Geologists and leading producers became convinced that an oil shortage was not far away, and two or three of the leading producing companies started a campaign to increase their storage facilities. The hysteria of exhaustion was also largely instrumental in starting a large amount of drilling.

### Surplus Soon Built Up

Long Beach, Santa Fe Springs, Huntington Beach and other fields promptly accommodated the companies having storage facilities and soon all tanks were filled. Obviously, the exhaustion did not come, and to add to the problem the fields settled to a high level, while new fields were found each year.

At least two companies saw the folly of their unnecessary

# Of California Help Situation

precautions and began to wonder how they could reduce their stocks. They are still wondering. Long after they realized they had been laboring under the wrong impression, they were forced to take more oil than they could handle economically. They had added so much to their stocks that a reduction simply reduced their assets by that much.

The two or three principal purchasing companies realized throughout the past two years that too much oil was being produced. Both the majors and independents were producing too much crude, but the "get-it-while-you-can" policy prevailed, with both large and small companies kidding themselves into believing that production would start a natural decline before the whole state was swimming in oil.

Stocks increased ridiculously during 1929. The majors and independents argued back and forth on the best plan to stop the increase, but nothing was done—at least in time to prevent a damaging jump. Stocks actually decreased slightly during 1930, but the total is still twice the necessary amount.

Operators not carrying large stocks insist that they should not be penalized through intensive curtailment to please the companies carrying the bulk of the present stocks. They do not feel that it is fair to hold them in check while the surpluses are being consumed. The major companies with the stocks are quick to retaliate with the claim that the little company has no surplus because it has been able to dispose of its production to the major purchasing companies at a price higher than conditions warranted. There is undoubtedly much truth in the claim that a large percentage of the oil now being carried in storage was produced by the independent producer who does not now find himself burdened with it.

But what of the two or three companies carrying the bulk of the 180,000,000 barrels of petroleum products in California? Much of this oil has been carried for years, and if the truth was known should be classed as a liability, rather than as an asset. These companies have become slightly panicky, and perhaps have reasons to find themselves in such a state. The carrying of this oil, year after year, while adding fresh oil to stocks, has gradually undermined a portion of the industry.

These companies would like to liquidate at any price. The folly of carrying oil over a period of years in expensive tankage is too well known to ignore. At least two California companies have three times as much oil in storage as they would like to have. They realize it and can not be blamed for their efforts to get out from under a load which can not be carried without severe strain to the stockholders. The fact that this oil was purchased at prices higher than those prevailing does not check their desire to liquidate if possible.

### Liquidation Costly

Through the liquidation, or reduction, of stocks there is the possibility that every company will suffer. The company having the stocks will suffer because it defied the rules of economics in piling up the stocks. The smaller producer will suffer because he helped to pile up the stocks through his sales to the purchasers. He will also be forced to reduce his production while the reduction is in process. He sold every barrel he could produce at the prevailing price to the purchasing company, and now he will feel the effects of an unrestrained output.

The majors and independents will suffer on about even terms. In reducing stocks, the company holding the stocks may be forced to take a loss in the process of liquidation, while the independent will at last run into his own surplus, plus the loss of a part of his present production.

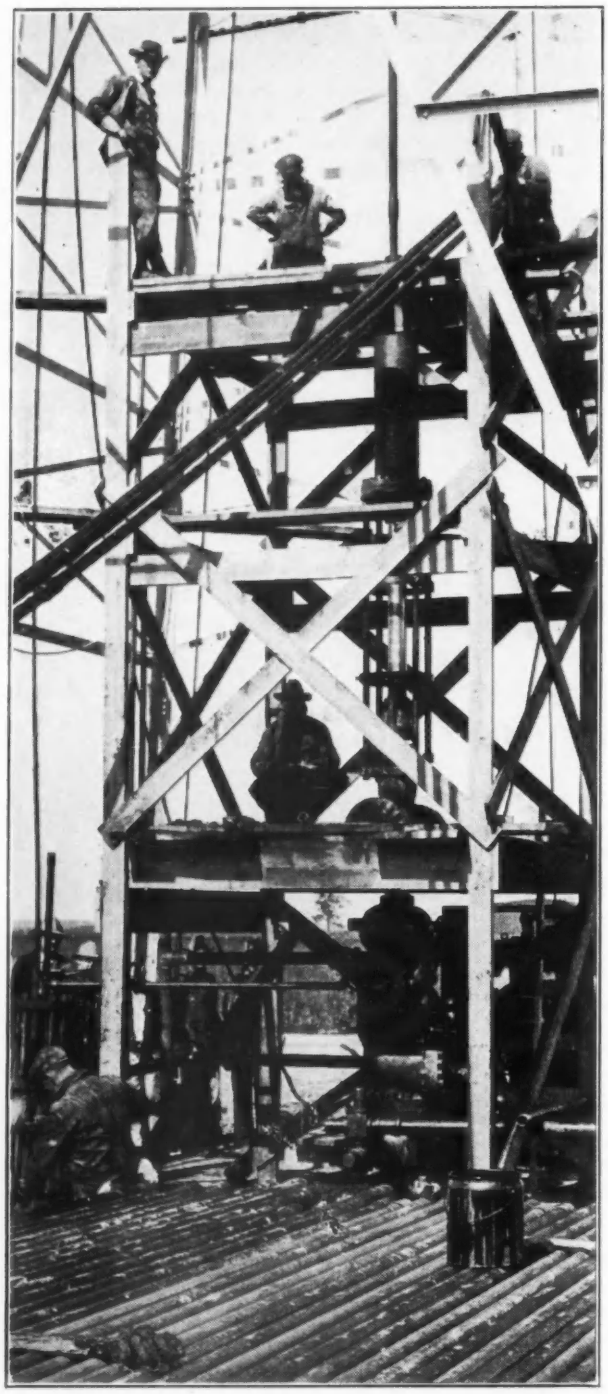
Excess stocks are undoubtedly retarding the recovery. A surplus of oil on the ground is not unlike a surplus of cotton or wheat. The question will always prevail as to who is responsible for present stocks, but regardless of who the guilty parties are, they are paying for overproduction.

During the boom at Santa Fe Springs, crude prices should have been reduced. There was little reason to develop the deep zone in this district, but despite the overproduction, practically every barrel of oil was marketed or stored at a price nearly twice as great as the present schedule. Whether it was a case of locking the barn after the horse was stolen, remains a question.

In maintaining the high price schedules through 1928 and most of 1929, the major producing companies intended to do what they could to pay a fair price for oil. They realized that lower prices were justified and probably felt that they would act as a governor on production. But they avoided criticism by maintaining a price actually out of line with market demands. Certainly the independent operator can not blame the major purchaser for imposing a low price on him, for the former got a good price for his production during the greater part of the time. Again it was about a toss-up, with the blame resting on both the small anl large operator. Lower crude prices would have harmed the conservative operator who took no part in overproduction, and it was largely because of him that the original price schedules were maintained in the face of continued overproduction.

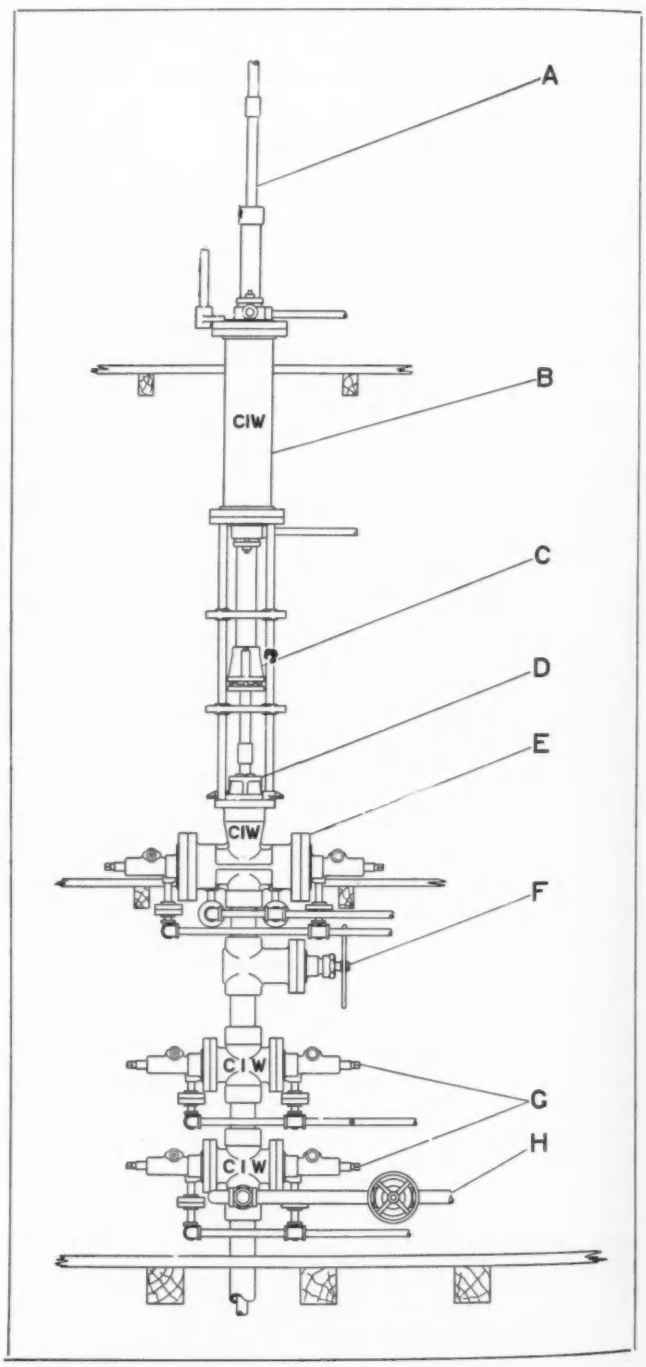
If crude prices had been reduced as production jumped, conditions might have been bad for a time. Certainly nobody can say they are not now bad, so it seems evident that reductions were in line before they came. Eventually the law of supply and demand will take a hand, and apparently it is now working overtime to correct the long period of overproduction. Crude price reductions two years ago might have caused criticism, but certainly they would have caused no more grief than they are now causing. Looking at the situation from an unbiased viewpoint, the best policy seems to be to reduce the price when the market cannot absorb the surplus. The present low prices seems to prove

(*Continued on page* 69)



# Well Pressure Tubing

By JACK LOGAN
*Staff Representative*




*Above—General view of pressure operated snubbing equipment in use at Barbers Hill. At right—Detail of pressure snubbing device shown in the photograph above. A—Tubing. B—Snubbing-in cylinder. C—Traveling Snubber. E—Snubbing Head. F—Gate Valve.—G—High Pressure Tubing Heads. H—Supply Line to Manifold. (Drawing courtesy Cameron Iron Works)*

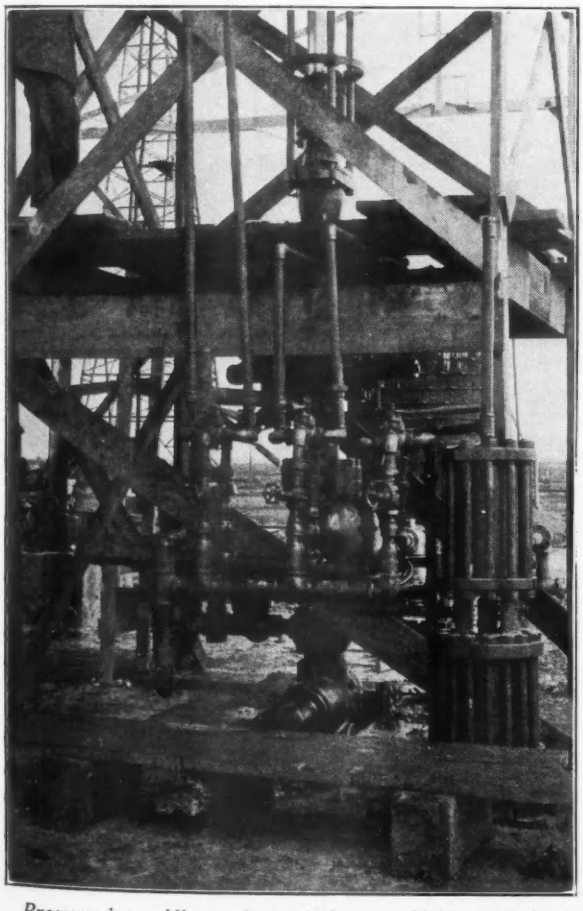
# Furnishes Power for Snubbing

## New Equipment has been used successfully in tubing deep producers at Barbers Hill

INCREASED recognition of the importance of tubing wells for obtaining maximum production and minimum gas-oil ratio is reflected in an interesting pioneering job of this nature done recently at Barbers Hill field, Chambers County, Texas.

Humphreys Corporation's Kirby A-9, a 6413-foot well on the northwest flank of the dome, was not producing satisfactorily, and it was decided to run tubing into it. That was done, employing recently perfected pressure-operated snubbing equipment which embodied new, advanced ideas; and the result was that pressure in the casing more than doubled when production was established through the tubing, while the production of oil increased approximately 50 per cent. At the same time there was a material decrease in the amount of gas produced.

The equipment which was used involved running of the tubing without the necessity of killing the well, and at no time was production interrupted. This practice of snubbing tubing against pressure into "live" wells is no longer new, having been introduced about 1928 in North Louisiana and Arkansas fields; and it is now widely endorsed, as it eliminates loss of production and obviates the danger of permanently killing wells.



*Pressure intensifier and regulating manifold and valves*

There was novelty, however, in the particular application of the practice to the above well at Barbers Hill, for on that job the snubbing equipment used was operated automatically from the standpoint of power required, the pressure from the well itself serving to snub the tubing in. In previous work of this nature the tubing has been commonly forced into the well by pull exerted through a draw works.

The snubbing equipment used on the Barbers Hill well is illustrated in the accompanying diagram and pictures. This equipment was designed and made by the Cameron Iron Works of Houston.

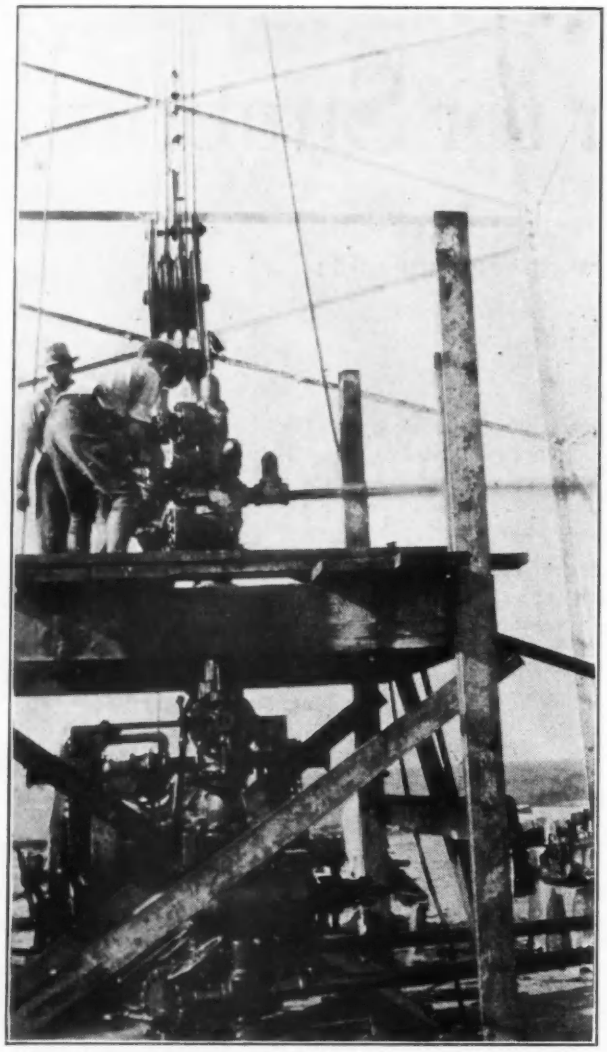
In Humphreys Corporation's Kirby A-9 there were two joints of screen on the bottom of a full string of 4¾-inch liner, which was swinging from a head at the top of the well. The last string of casing which had been cemented was 6⅝-inch, set at 6350 feet. The well had come in originally about October 1, 1930, flowing 2000 barrels of 35 gravity pipe line oil daily through a 17/32-inch choke and showing 690 pounds pressure. But before the tubing was run into the well in November, the production had declined and the pressure on the casing had decreased to 220 pounds.

The string of tubing which was run into the well consisted of 1000 feet of two-inch A.P.I. upset tubing on the bottom and 5400 feet of 2½-inch A.P.I. upset on to the top of the well.

The tubing was run dry. That is, it was plugged at the bottom with a plate glass disc three-quarters of an inch thick, while as a precaution against great pressures a second disc of similar kind was placed in the tubing 2500 feet off bottom. After running the tubing those discs were broken with a 7½-pound "go-devil" made of three-quarter-inch pipe filled with lead and equipped with a steel nose. The steel nose, slightly larger than the remainder of the device, had spiral grooves cut in it to give a spinning action as it fell. The Christmas tree was put on the well and connected to the flow lines before the "go-devil" was dropped. It required about 15 to 20 seconds for the device to reach and break the bottom disc.

In order to explain clearly the actual procedure followed on this tubing job it will be necessary to go somewhat into detail as to construction of the new pressure-operated equipment which was used.

The equipment was of unit construction and so designed that the separate units were complete within themselves, but when connected together they cooperated as a single machine. The main units (see accompanying photographs and drawings) included a high pressure tubing control head,



*Humphreys Corporation's Kirby A-9 coming in through the tubing after the go-devil was dropped. It was allowed to blow into the atmosphere through one-fourth-inch choke, until it began making oil. The flow was then turned into the flow line to the separator*

a snubbing-in head, a snubbing-in cylinder, and a pressure intensifier.

The tubing control head was secured to a swedge in the 8⅝-inch master gate valve that was on the well, and above the tubing control head was placed the snubbing head. Above the snubbing head was placed the snubbing cylinder. Off to one side was placed the pressure intensifier, which was connected by piping to the tubing control head behind the rams.

The snubbing head and snubbing cylinder were operated directly by the well pressure, and the control head was operated by an intensifier, which in turn was operated directly from the well. These three units, operating directly from the well, were controlled by three four-way valves; one for each unit. The valves were made up into a manifold and were operated by one man in a stationary position.

The intake side of the manifold was connected to the well below the tubing control head, and the exhaust side of the manifold was connected into the flow line to the separator. Consequently there was no waste even of gas and oil used in operating the equipment, and the normal flow of the well was not interrupted while the tubing was being run.

### Tubing Control Head

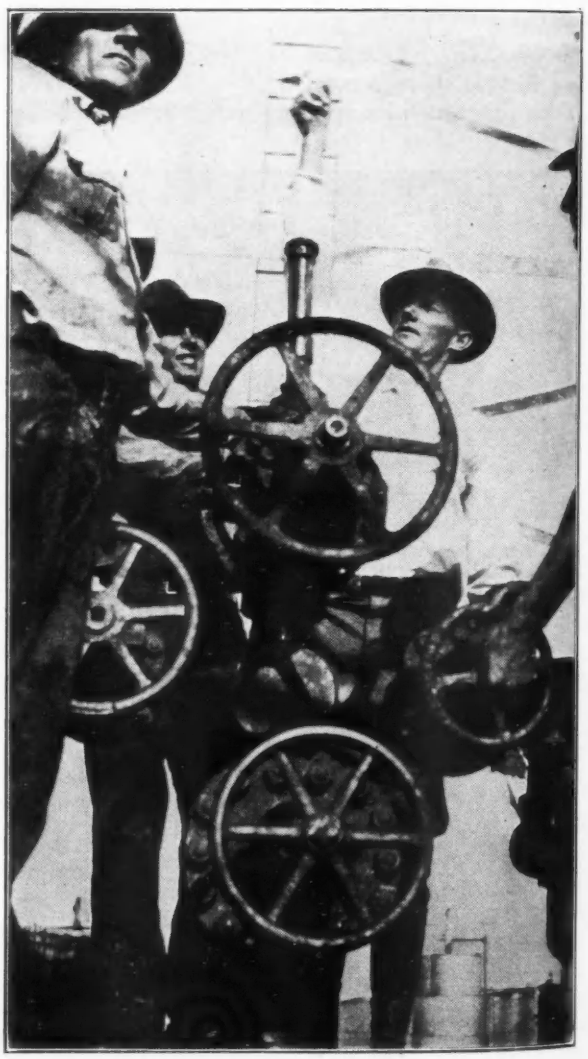
The tubing control head, employing special ram principle of packing off around the tubing, was in the general form of a cross, and the rams adapted to be operated manually by means of a rack and pinion or hydraulically by means of the pressure intensifier.

### Snubbing Head

The snubbing head was also in the form of a cross. The body of this head had an enlarged bore at each end of the horizontal axis. Each of those enlarged bores housed a piston which was secured directly to the rams. The well pressure was piped to each side of those pistons, and could be diverted to either side by the four-way valve. Opening and closing of the rams was performed at will by the diversion of the pressure to the front or rear of the pistons as desired. At the top of the snubbing head was a bowl equipped with slips. The slips were inverted from the usual position of pipe slips, and were held up in the bowl by a strong spring. They operated to hold the tubing in the well as it was snubbed in and while the traveling slips were being run up to get fresh grips on the tubing. Those slips also automatically opened up to pass the couplings as they came in contact with them. The action of both sets of slips was automatic and required no manual manipulation.

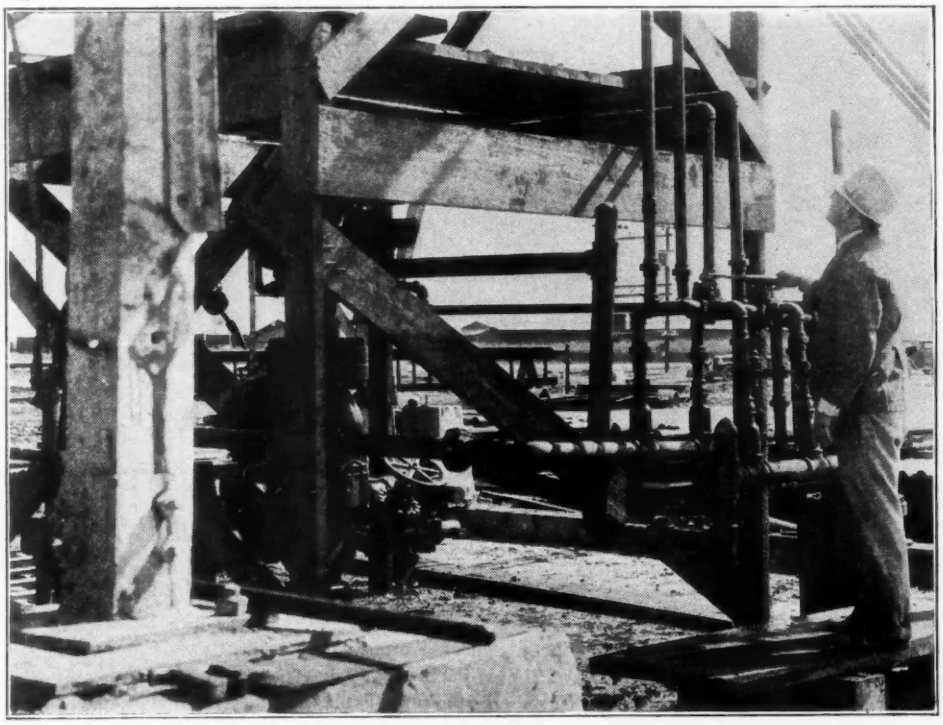
### Snubbing-in Cylinder

The snubbing cylinder was mounted above the snubbing head on a column composed of four two-inch vertical steel



*J. B. Isaacks drops the go-devil into the tubing*

rods. The piston and piston rod in this cylinder were hollow. The piston had a four-foot stroke and would snub in a maximum of four feet of tubing at each stroke, although smaller strokes could be obtained by operation of the valve controlling the snubber. The piston rod was 5½-inch outside diameter, and extended through a packing box in the head at each end of the cylinder. Tubing was fed downward through the hollow rod, more tubing being added above the cylinder as needed. Attached to the lower end of the hollow piston rod were an inverted bowl and the set of snubbing-in slips which traveled up and down, being made so as to grip the tubing when traveling downward and to slide up the tubing when moving upward. Those slips would automatically open sufficiently to pass over the couplings in the string of tubing.



*W. E. King, engineer for Cameron Iron Works, operating valves which control snubbing equipment units*

### Pressure Intensifier

The pressure intensifier consists of two opposed cylinders with inter-connected pistons. One of these cylinders is of a larger diameter than the other, which gives an unbalanced pressure. The larger cylinder is connected directly to the well below the tubing control head, and the smaller cylinder is connected to the control head behind the rams. Pressure entering the larger cylinder actuates the piston in it, which in turn actuates the piston in the smaller cylinder. The smaller cylinder is filled with a liquid which is forced through the piping into the control head behind the rams. Due to the varying diameters of the cylinders this liquid is forced at a higher pressure than that in the well, and it closes the rams against the well pressure. The well pressure will open the rams in the tubing control head when pressure on the larger piston in the intensifier is released. As the rams open up, the liquid behind them flows back into the intensifier.

At the outset of the tubing job at Barbers Hill the snubbing head and tubing control head were both open, and the master gate was still closed. Tubing was lowered through the tubular piston rod and thence through both heads. With the lower end of the tubing just above the gate valve, the snubbing head was closed around it and the gate valve was opened, after which the snubbing-in process was begun.

The piston in the snubbing cylinder was run to the top, and then brought down, snubbing in four feet of tubing. The same action was repeated about three times, bringing the first coupling down to a position just above the rams in the snubbing head. The rams in the tubing control head were then closed, and those in the snubbing head were opened. Less than a stroke of the piston brought the coupling below the rams in the snubbing head, which were then closed, and those in the tubing control head were again opened. The opening and closing of the heads alternately to pass couplings was continued, and more tubing was added in doubles above the cylinder as needed.

All these operations were performed by the pressure in the well except the adding on of tubing, which was done manually, and the operating of the levers on the four-way control valves. The levers required a 90-degree throw to reverse the flow of the pressure through them.

The tubing was lowered into the well at the rate of about 15 doubles per hour. The greater part of that time, however, was required in picking up the tubing off the rack and making it up on the string which was going into the hole. It required less than one minute per double to lower into the well and operate the heads to pass couplings.

In this well about 575 feet of tubing was snubbed in before the string became heavy enough to go in of its own weight. At that point the snubbing cylinder was removed, and the tubing was lowered with elevators, while the heads were operated as before.

It was necessary after running in the 1000 feet of two-inch tubing to change the size of the rams in the two heads before proceeding with running in the 2½-inch portion of the string.

After the full string of tubing was run, it was suspended from the rams in the tubing control head. The snubbing head was then removed, and the Christmas tree was set up and connected into the flow lines. The tubing control head remained on the well as part of the Christmas tree. Then when all connections were ready, the "go-devil" was dropped, as described previously.

Since the tubing control head remains on the well it will permit raising or lowering of the tubing at any time. The gate valve may be closed at any time, the Christmas tree removed or changed, or the rest of the snubbing equipment can be re-installed to perform any tubing jobs to which it is adaptable.

When the well had been tubed the pressure intensifier was removed along with the snubbing head, leaving the tubing control head to be manually operated should it be necessary to make any changes in the tubing arrangement.

W. K. WHITFORD
*Barnsdall Oil Corporation, new chairman of the Mid-Continent Division of Production, A. P. I.*

# Economic Field Methods Offer Means of Operating

By FLOYD SWINDELL
*Staff Representative*

TULSA.—Inclement weather reduced expected attendance at the regular spring meeting of the Mid-Continent district, A.P.I., division of production, held in Tulsa, Friday, March 27. However the relatively small group of engineers, executives, superintendents and lawyers, joined in what was perhaps the most worthwhile district meeting that has been held during the present crisis. High sounding theories and projects that might ultimately develop were discarded in favor of a simple and practical discussion as to how and why economic practices should and can be made immediately effective. Numerous suggestions were made and concrete examples given to show that operators are rapidly becoming attuned to the depressed condition.

R. W. Bond, retiring chairman of the Mid-Continent district, opened the meeting and introduced Carl M. Young, national chairman of the A. P. I., division of production, who expressed pleasure at being able to attend the meeting and called upon the assembly to be free with its opinions and suggestions. R. S. McFarland, vice-president and general manager, Sunray Oil Company, spoke extemporaneously on the subject of "Over-production and Why," substituting for Judge James A. Veasey, who was to have presented a paper on "Legal Aspects of Oil and Gas Production," but was unable to be present due to illness. Mr. McFarland, a former president of the American Association of Petroleum Geologists, discussed the progress made over the past few years in the science of finding oil and stated that the present condition of over-production was largely due to the progress that has been made in the finding, drilling for, and producing of oil and gas. He pointed out that the three most misunderstood words now being used in connection with the oil industry were, "Conservation," "Proration," and "Potential." This suggestion called forth a large amount of discussion especially in regard to the subject of potentials.

The remainder of the morning session was devoted to a paper on the "Economic Aspects of Oil and Gas Production," by H. M. Stalcup, vice-president in charge of production, Skelly Oil Company. In dealing with the present condition Mr. Stalcup said, "Despite the ultimate outcome of the problems of overproduction and under-consumption, or the movements for or against an oil tariff or embargo, or of the ultimate outcome of proration, and regardless of when unitization is adopted in fact and in practice by our industry—all certainly important factors in oil economics—those of us who are charged with the responsibility of reducing to possession the elusive crude oil and gas under our leases, at a cost of anything less than its present sale value, have in the meantime what might well be regarded as a he-man's job cut out for us.

### Asks Orderly Development

"It is obvious that the old policy of action and results at any cost must give way to a more sane and orderly policy of field operations. We must improve in the art of salvaging, patching up, and repairing equipment to obtain greater length of service, exactly as you would do if it were your money that was being spent."

Two of the four outstanding suggestions of the day were contained in the paper. Mr. Stalcup stated that until early in 1930 his company had maintained its operating records on the basis of the lease as a unit. In August of that year the company changed to an individual well record basis where possible and the results have been more than gratifying. This practice has made possible the elimination of a large number of unprofitable wells as evidenced by the

J. R. WILLIAMS
*Production engineer, Skelly Oil Company, has "A Plan for Better Utilization of Gas Energy in the Production of Oil"*

R. F. MCARTHUR
*Vice president, Barnsdall Oil Corporation, talks on "Unit Operation"*

# Suggested By Engineers Correcting Some Evils

D. L. Trax
*Gypsy Oil Company, new vice chairman of the Mid-Continent Division of Production, A. P. I.*

statements and examples presented by representatives of several companies who are using the individual well as a record keeping unit. One concrete example was that of a lease in the Powell field of Texas where seven wells were producing approximately 1700 barrels at a slightly excessive lift cost. The lease as a whole was showing a profit. Analysis of each well revealed that three were making practically no oil and that the lift costs were far beyond reason. After abandonment of the three wells production dropped temporarily to about 1100 barrels but within a reasonable time had come back almost to the 1700 barrels which had formerly been secured from seven wells and this at a greatly reduced lifting cost.

Applying a new thought to the much discussed problem of unitization Mr. Stalcup suggested the possibility of solving a number of old and settled production situations by letting one of the interested producers in a group operate, not only the adjoining lease, as is now quite often done, but a sizeable group of properties, and in the case of many small pools, the entire group of leases constituting the pool. It is obvious that appreciable savings could be made by this plan through reduced overhead and supervision as well as in the direct operating expense.

One outstanding obstacle in the way of perfecting an arrangement of this kind probably grows out of the belief and pride that each company has in its producing department, each feeling that its own department is perhaps a little more efficient than others. This tends to dampen the enthusiasm of most organizations when a unitized idea is broached except for the one which proposes to do the operating.

### Suggests Exchange of Leases

As a method of attaining some degree of unitization of old properties without resorting to sole operation of pools or groups of properties by one organization, Mr. Stalcup presented the idea of exchange of leases. For example: Producers "A" and "B" own adjoining leases of a settled nature in the two pools "C" and "D." Producer "A" trades his lease with three wells pumping 25 barrels per day, offsetting or nearby "B's" lease in the "C" pool, to "B" for his lease in the "D" pool on which he has an approximate equivalent production. The result is that each producer still has his same approximate number of wells and the same amount of production but owns it all in one pool and on adjoining or nearby leases. This suggestion met with hearty approval of the group and indications point to the popularity of such practice in the future. Prairie Oil & Gas Company is reported to have recently exchanged a number of leases under this plan and Skelly Oil Company has several transactions under advisement.

The afternoon session opened with a business meeting at which time the following officers were elected to serve during 1931: W. K. Whitford, Barnsdall Oil Corporation, chairman; D. L. Trax, Gypsy Oil Company, vice-chairman; and E. L. Bell, Deep Rock Oil Corporation, secretary-treasurer. The district advisory committee will be composed of the following: H. M. Stalcup, Skelly Oil Company, chairman; A. W. Ambrose, Empire Companies; C. W. Baker, T. B. Slick Estate; W. K. Whitford, ex-officio member as district section chairman; R. A. Bonnell, Tidal Oil Company; J. J. Conry, Carter Oil Company; J. S. Dewar, Phillips Petroleum Company; C. P. Dimit, Phillips Petroleum Company; Geo. A. Dye, Wilcox Oil & Gas Company; E. R. Filley, The

(*Continued on page* 64)

Blank & Stoller
Judge James A. Veasey
*Carter Oil Company, was unable to present his paper on "Legal Aspects of Oil and Gas Production"*

E. L. Bell
*Deep Rock Oil Corporation, re-elected secretary and treasurer of the Mid-Continent Division on Production, A. P. I.*

H. M. Stalcup

# Some Economic Production

By H. M. STALCUP
*Vice-President in charge of Production, Skelly Oil Company*

THE writer is fully conscious of the very wide range which his assigned subject covers, and is equally aware of his inability to cover in one brief article—if indeed he could were he to write a book on the subject—all of the manifold phases of so all-inclusive a subject.

Despite the ultimate outcome of the problems of over-production and under-consumption, or the movements for or against an oil tariff or embargo, or of the ultimate outcome of proration, and regardless of when unitization is adopted in fact and in practice by our industry—all certainly important factors in oil economics—those of us charged with the responsibility of reducing to possession the elusive crude oil and gas under our leases, at a cost of anything less than its present sale value, have in the meantime what might well be regarded as a he-man's job cut out for us. It is, therefore, from this particular viewpoint that the subject of this paper is approached. Likewise, the engineering subjects of gas conservation and utilization, repressuring, pressure maintenance, gas lift methods, and the prevention of crooked holes—certainly all coming within the scope of oil production economics—will, nevertheless, not so much as be mentioned again in this discussion, it being the writer's thought that, while not in any manner wishing to detract from the great importance of such subjects, they have been, and are being, given much more thought and attention than some of the relatively simple, everyday, practical problems, but which are none the less important and well deserving of our best thought and analysis.

This discussion will, therefore, be limited to only certain of these everyday, homely, and practical problems of developing and operating oil producing properties, which, as a matter of fact, have been given entirely too little serious consideration by many of us.

It is doubtless unnecessary for me to more than briefly stress here the critical industrial conditions existing throughout, not only our own wonderful country, but the entire world, for it is only too apparent and we are all painfully conscious of that fact. Such a condition will not—indeed cannot—in such a country as ours long continue, and we can therefore look forward with every confidence to the inevitable return of progress and attendant prosperity. Such improvement in country-wide and world-wide economic conditions necessarily, let us hope, will be reflected in an improved state of affairs within our own industry; but let us not for a moment cling to the thought that the good old days of high priced crude and refined products are to be with us overnight. To do so in the face of the statistical facts affecting our industry is for us to indulge in the very questionable pastime of "kidding" ourselves.

### Period of Readjustment

A conservative dispassionate appraisal of our industry's condition can lead to but one safe conclusion, namely, that it is passing through a most important period of readjustment from which it cannot quickly and completely emerge, and those of us who are charged with the responsibility of carrying on our operations for the profitable recovery of oil must take time to read and study the signs along the way, to the end that we may all emerge from the present ordeal with stronger and more closely-knit organizations attuned to the new era in the oil producing world that we are just now entering.

There is probably no industrial activity in which the element of glamour and romance are so pronounced as in that of developing for and producing crude oil. This is becoming increasingly so as we penetrate deeper and deeper into the bowels of Mother Earth in search of the once precious fluid. With each additional foot in depth, we encounter greater natural pressures, and the thrill and urge of wrestling with the tremendous and unwieldy forces of nature proportionately increases.

This same glamour and romance, accentuated by the fact that such operations are usually carried on throughout widely scatered areas and along far-flung battle fronts with attendant inefficient lines of communication, unfortunately very readily lend themselves to that haste and loose-jointedness of action that easily makes for wasteful practices. How differently situated are those industries where the major and oftentimes sole activity is within the small confines of a securely fenced tract of land only the sore beset production man can appreciate.

It is apparent that notwithstanding the admitted necessity for diligence and action in protecting our properties against drainage—certainly, so long as we can continue to

# Aspects of Oil Methods...

***Unit operation of producing properties as heretofore discussed at much length, has always contemplated such operation at discovery of the pool. At such time each owner of acreage is prone to guess that his part of the acreage is best in the vicinity, which is a bar to entering unit arrangements. In the accompanying paper, read by Mr. Stalcup before the Mid-Continent district of the American Petroleum Institute Division of Production at Tulsa, March 27, 1931, he presents a new possibility in unitization which would unitize producing properties in their secondary or settled stage of production. He points out that, through exchange of properties of this class, operators could avoid the waste and expense of operating wells at scattered points in the field, thus lowering costs and probably increasing production.***

operate under the generally existing competitive drilling conditions—there is still entirely too much frenzied haste indulged in in carrying on development work. It is axiomatic to say that "haste makes waste," but waste is inexcusable and, to say the least, expensive. There is a vast difference between an orderly, well planned, and systematic development campaign, in which all necessary consideration is given to the essential requirement of dispatch, and the hit-or-miss, catch-as-catch-can, three-alarm methods, all too often indulged in by most of us producers in our eager haste to beat the offsetting neighbor to the hidden treasure. It seems to me—at least so long as the well known condition of over-production, with its consequent hand-maiden proration, is with us, when certainly the element of drainage is greatly minimized—we shall be foolhardy indeed if we do not take advantage of this easily realized economy in our development work. Once having done so, and enjoyed the attendant benefits of so sane a policy, we shall likely be slow in getting away from it in the future.

### Progress Notable

Marked advance in practically every phase of the job of developing and operating oil properties has been registered with each passing year of the industry's history. Particularly has this been outstanding in the past few years, during which time remarkable improvements have been perfected that have made deeper and more rapid drilling easily accomplished. Better design of pumping equipment, including the prime mover, rig front, belting, tubing, sucker rod, and working barrel, has all combined to increase not only the efficiency of our pumping operations, but is in turn clearly reflected in a lowered recovery cost.

Another natural outgrowth of the widely scattered and isolated feature of oil producing operations is that of a decided tendency toward extravagance and wastefulness in the purchasing and utilization of material and equipment. There is no gainsaying the fact that there is plenty of room for a vast improvement in this respect by most of us.

We have all been entirely too prone to run to the supply store and buy something new, instead of making what was already available suffice. Oil field equipment is notoriously short-lived, principally on account of the relatively rough use to which it is subjected, but also largely on account of the unnecessarily rough treatment and lack of careful attention that it receives. We will all have to improve this condition materially if we are to operate profitably under existing markets.

Definite improvement in this direction can easily be made by our seeing to it that all field equipment, whether it be automobile, truck, tractor, boiler, gas engine, clutch, belt, sucker rod, or working barrel, be operated with discretion, gumption, and care, and not by trying to get the last possible mile per hour, the last possible ounce of horsepower, or the last possible revolution per minute out of such equipment.

It is obvious that the old policy of action and results at any cost must give way to a more sane and orderly policy of field operations. We must improve in the art of salvaging, patching up, and repairing damaged equipment to obtain greater length of service, exactly as you would do if it were your money that was being spent.

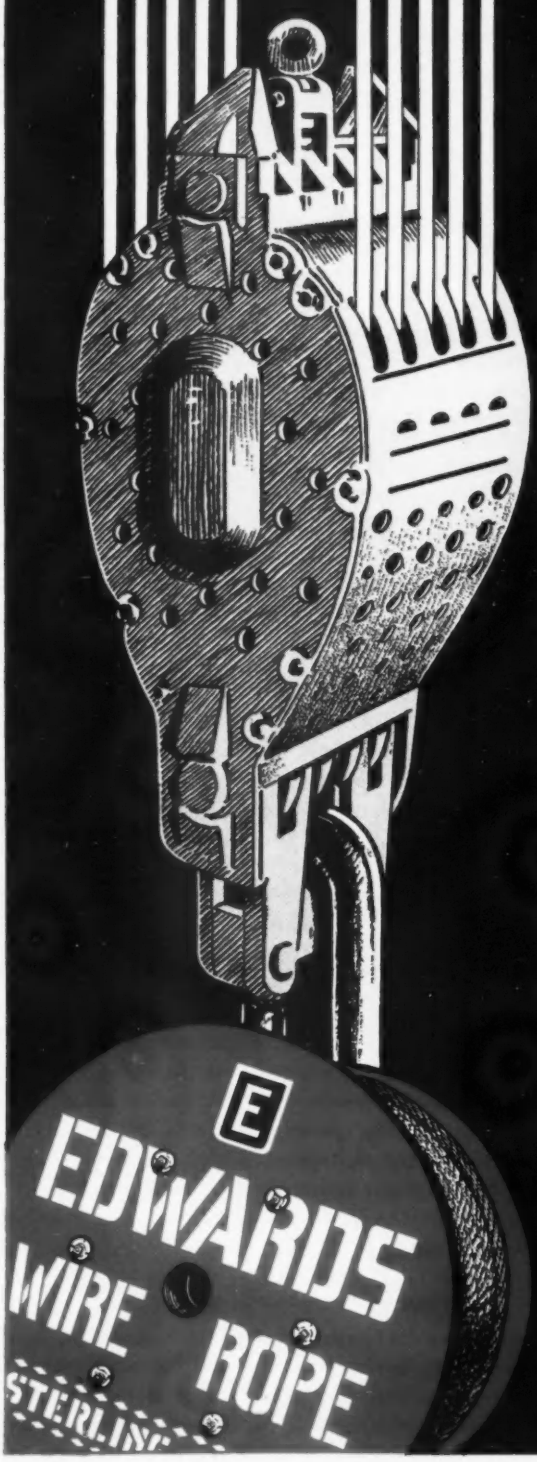
A greater appreciation of the importance of the maintenance of the gravity of oil at its highest point, and of the intrinsic worth of casinghead gas as an important revenue producer, has been responsible for the rapid progress made in the well-nigh universal utilization of individual oil and gas separators for each well, and the adoption, where suitable, of welded or riveted stock tanks, resulting in the present so-called "closed circuit" method of crude oil handling wherein the oil is never exposed to atmospheric conditions from the time it emerges from the producing formation at the well bore until it has been delivered into the pipe line serving the property.

One could, without exaggeration, continue at quite some length, listing, detailing, and discussing the many and varied ways in which economies and efficiencies affecting development and operating practice have been put into effect in recent years, but that is another story and rather beside the point of this discussion, for our problem now is to look only ahead, at the same time profiting by the lessons of past experience.

### Economic Conceptions Change

Our conceptions of economic practice six months ago—back in the good old days when crude oil was still worth drilling for, and when East Texas meant little to many of us other than being a piney-woods section of the country,

EDWARDS LINES ARE LONG LIFE LINES




TON MILE PERFORMANCE

MID-CONTINENT HEADQUARTERS
THOMPSON BUILDING TULSA, OKLAHOMA

EDWARDS WIRE ROPE
E. H. EDWARDS COMPANY
MAIN OFFICE & FACTORY
SAN FRANCISCO
BRANCHES
SEATTLE • PORTLAND • LOS ANGELES

the chief product of which was cotton and the chief worry of which was the problem of boll weevil extermination—are now inadequate, if, as seems quite apparent, we are to have altogether too much crude oil on our hands for quite some while to come, and consequently will have to struggle along on what will at least be a buyers' market crudewise for many months, if not years, to come. The writer can lay no claim to being a prophet or the son of a prophet, so his prediction of a continuing low and unsatisfactory crude market may be discounted as you will; but on one thing we can all agree, namely, that, as someone has said, the most obvious thing in connection with oil is that there is now altogether too much of it. So, then, existing conditions call for the utmost economical methods, let the future hold what it may.

Until early in the year 1930, the operating records designed to control efficiency of operations and to be a check upon the various economic factors—of the company with which the writer is associated—were maintained on the basis of the lease as a unit. Since that time such records have been kept, to some extent, with the individual well as the unit. This change has proven to have been most fortunate and valuable, in that there has been afforded a ready and definite analysis of individual well operating expenditures and earnings, that has made it easily possible to quickly, and yet intelligently, cease the operation of unprofitable wells during the past several months, when necessity has made rigid retrenchment and cost reduction the general order of the day.

When using the entire lease as the unit in gauging the economy of our operations, we were quite apt to continue to spend money on the operation of certain wells that were excessively high in operating cost and excessively low in productive capacity, or both. It has been found that by reversing this order and carefully analyzing individual well costs, one or more wells on a given property may be shut down, resulting in the loss of but a nominal amount of oil, while at the same time effecting a substantial reduction in the operating expenditure. When the lease is used as the unit and its records disclose a substantial operating profit, we are apt to be lulled into a feeling of complacency and therefore likely to overlook the well or wells on such a lease that may be steadily and continuously losing money, and their consequent reconditioning or abandonment too long delayed.

In good times or bad, high markets or low, there is no possible justification, except where it is necessary to hold a lease, for the continuous pumping of a well, the gross revenue from which is not sufficient to cover its direct cost of operation; and nothing but an individual well cost record or analysis will definitely disclose which wells are in that category.

### Records All-Important

While on the subject of records, too much emphasis can hardly be placed on the importance of well, operating and equipment records, as distinguished from those of a conventional accounting nature, as an aid in increasing recovery and lowering costs. Time was when entirely too little attention was given to this all-important phase of our problem, but as such problem becomes increasingly difficult, involved, and complex, the absolute necessity for data, obtainable only through the keeping of such records, is apparent.

We cannot intelligently tackle the ofttimes questionable procedure of drilling deeper, or otherwise reconditioning a 10-year old well, without the aid of an accurate and all-inclusive record of that well's initial completion and every phase of its operation to date. All too often such records will be found to be sadly lacking in one or many essentials, and we find, through the bitter and costly school of experience, conditions that, had they been known through reflection in the record, would have precluded our undertaking the job in the first place.

One logical development occasioned by present conditions in our industry is the pronounced tendency for neighboring operators to join forces and effect mutual economies by perfecting simple operating arrangements wherein one of them operates both properties for the joint account. There is abundant opportunity for a great many more of these sensible arrangements to be perfected and their obvious saving realized.

Carrying this thought a step further, and to its logical conclusion, what is there to prevent us producers from applying one of the principles of unitization to an almost endless number of old and settled production situations by letting one of the interested producers in a group operate, not only the adjoining lease, as is now quite often being done, but a sizeable group of properties, and in the case of many small pools, the entire group of leases constituting the pool? A definite reduction in lifting costs could thus be accomplished by the elimination of a great amount of needless, if not to say senseless, supervision and overhead, as well as the perfectly obvious savings in the direct operating expenses. This is the age of co-operation, particularly in the producing branch of the oil industry, and it does appear entirely logical that we should take advantage of such obviously common sense savings.

### Unitization Difficult

Unitization of new and only partially developed pools is admittedly difficult, partly on account of the fact that relative values are unknown, and we have a natural fear of giving up more than we receive. This problem is not so important, however, in the case of settled or semi-settled pools, and unitization of such should be relatively easy to realize; and, once having experienced the many economies of such a plan of operation, substantial progress will have been made in the general advancement of the whole theory of unitization as it applies to new development.

One outstanding obstacle in the way of perfecting the economical operating arrangements last mentioned, as well as in the case of unitization of undeveloped or flush pools, grows out of the commendable, but probably erroneous idea we producers all have that our own producing organizations are just a little better than the other fellow's, and the consequent lack of enthusiasm registered by most of us when such plans are broached, unless we are to do the operating. A plan or policy is suggested that is worthy of thought, which will accomplish the same end, while at the same time allowing all of us to "strut our stuff" as the one and only efficient and economical oil producer. Such a plan contemplates simply the exchange of small producing properties by producers.

To illustrate: Producers "A" and "B" own adjoining leases of a settled nature in the two pools "C" and "D." Producer "A" trades his lease with three wells pumping 25 barrels per day, offsetting or nearby producer "B's" lease in the "C" pool, to "B" for his lease in the "D" pool on which he has an approximate equivalent production. The result is that such producer still has his same approximate number of wells and the same amount of production but owns it all in one pool and on adjoining or nearby leases; and the consequent and apparent economies are so obvious as to require no elaboration. However, in addition to having improved their respective situations from the standpoint of lessened cost of a continuing nature, both opera-

(*Continued on page 65*)

# On and Off the Dome at Kettleman Hills

## Concerning Things We Do Not Know About the World's Greatest Gas and Oil Fields

By STANLEY C. HEROLD, Ph. D.

*DR. HEROLD has made a special study of Kettleman Hills since the initial well was brought in. He is a consulting geologist and engineer with offices at 756 South Broadway, Los Angeles. For the past year, through appointment of Dr. Ray Lyman Wilbur, Secretary of the Interior, he has served as engineering umpire at Kettleman Hills, a position which terminates with the active operation of the Kettleman Hills North Dome Association.*

*This article is reproduced from The Oil Bulletin, the official publication of the California Oil and Gas Association.*

AN estimate on production appears to be an opinion, usually implying a careful consideration of incomplete data, while a guess seems to require little thought and no data. Perhaps between estimates and guesses there exists a happy merging ground wherein it becomes difficult to make distinctions. Here we may picture geologists and engineers in filmy costumes dancing lightly, swinging garlands of roses, over sweet-scented meadows, while pretty maidens, their stenographers, similarly dressed, play beautiful music on stringed instruments of ancient design.

"Fifty thousand barrels per acre," sings one geologist with Kettleman Hills suggested. "Two hundred and fifty," sings another, while the engineers take their round numbers between, all stepping in sensuous rhythm, never tiring, ever smiling. On go the strains of the lyres!

To be sure, we do not know what we are talking about when we discuss Kettleman Hills. One estimate, today, seems to be as good as another. Our opinions depend upon our pessimistic, conservative or optimistic natures. The data are truly incomplete. To begin with, not all of us will look upon the Kettleman Hills North Dome as one big kettle. It is just that. Where we dip gas and oil out, something must go in. This something is water—edge water. In the kitchen a hole in the bottom of the kettle will, given time, allow all the contents to escape. The bigger the hole, or the more of equally-sized holes, the less the time. On the dome the kettle is inverted. Otherwise the analogy is correct. As stated long ago, a string of 10 or 20 wells along the axis will drain all gas and oil from the Temblor formation on the dome proper, given full penetration of the formation at these wells.

What do we mean when we speak of recovery per acre? Do we have in mind acre-contents of the formation, or well performance? These are quite different, for nature provides no impassable wall between wells in this field. Acre-contents can be estimated, and well performance will depend upon such an estimate, plus a consideration of the location of the well on structure and the number of other wells, with their locations, on the same structure. Today it is impossible to forecast well performance. Production curves will not help us in the task. The curves are now declining, but some day they will go off horizontally. For how long? For wells on the axis they will travel so until the acre-contents for all acres have been drawn from the reservoir, and for all other wells a shorter time denoting the complete encroachment of edge water.

We do not know how many acres at the North Dome are underlain by Temblor saturated with gas and oil. However, 25,000 is a fair estimate perhaps, considering the position of an alleged lowest closed contour at 7800 feet below sea-level. But our ideas of this as a lowest closed contour may be in error. In the future we will have a better idea about this. Again, we do not know the total thickness of the Temblor at any place on the dome. The deepest penetration is approximately 1400 feet. Would 1500 see bottom? Would 2000 feet? Possibly deeper yet? The latter is hardly conceivable, perhaps.

The Elliott zone of 1000 feet at the top of the Temblor has an average porosity of 12 per cent. We do not know the porosity of the Ochsner zone of 400 feet below. Perhaps it is more or less of the same value. The Elliott zone contains wet gas and a colorless condensate we call oil. What does the Ochsner zone contain? It appears to have less gas and a normal black oil of fairly high gravity. Both zones are made up of uncounted number of strata. These are undoubtedly homogenous in texture individually, as they extend over the dome, but among them we find all gradations conceivable between sandstone, shaly sandstone, sandy shale, and shale proper. We have little or no data on the permeability of these various strata, but of course these data are unnecessary in computing acre-contents. Only the porosity and gas-oil contents of the pores, as these exist under heat and pressure, are required. Temperatures and pressures we know fairly well.

Let's try a dose of data right or wrong, and see what happens:

| | |
|---|---|
| Number of acres on North Dome..... | 25,000 |
| Contents per acre (as received at surface) | |
| Condensate or oil, barrels..... | 67,000 |
| Natural gasoline, barrels..... | 33,000 |
| Dry gas, m.c.f. .....1,500,000 | |

It is evident that the acre-contents in total liquid is here assumed to be 100,000 barrels, seemingly a conservative figure. The gas-oil ratio is taken at about 22,400 cubic feet per barrel, for the original ratio of the field is probably the best to be used today. To continue:

| | |
|---|---|
| Market value of oil .....per barrel | $1.65 |
| Market value of gasoline.....per gallon | .05 |
| Market value of dry gas.....per m.c.f | .10 |

As to the dry gas we can guess that one-quarter will go to

# A TOAST *to the* SWITCH *and the* VALVE

WHEN all the statisticians meet in convention assembled and total up the last indice of Southwestern progress, the chances are that the resolution committee will have a good word to say for the part that oil and electricity have played in amassing the astounding totals.

The oil industry has given impetus to some of our foremost cities, has enriched our schools and public institutions, has given employment to hundreds of thousands of people and brought new wealth to the vast lands of the Southwest. The electrical industry has brought power to thousands of new industries, provided dependable transportation in our cities and eased the burdens of men, women and children in every county throughout the whole Southwest.

In the Gulf Coast country we find electricity working in the oil fields to provide instant power for the drilling of wells, lighting of derricks, pipe lines and assisting in many ways to increase production and lessen the cost of producing oil. The hand that knows the feel of a throbbing valve is also familiar with the power that is back of the electrical switch.

*Engineers of this company are familiar with the power problems of the petroleum industry. Consult them freely on the use of electric Power.*

GULF STATES
UTILITIES COMPANY

*General Offices*

BEAUMONT, TEXAS LAKE CHARLES, LA.

the winds, and three-quarters will find the market. Of course it may be advisable to guess again at some future date.

We can now compute the market value per acre-content:

| | |
|---|---|
| Oil | $110,550 |
| Gasoline | 69,300 |
| Dry gas | 112,500 |
| Total | $292,350 |

This total, when multiplied by 25,000, gives a gross market value to the contents of the dome approximating seven billions of dollars. Well, this may be about right. However, it is possible that we have taken the content low and the acreage high. A different value of the gas-oil ratio, which may be found advisable to use in the future, will not modify our computations greatly. If we cut the gross as we have it in two we can still be certain that the North

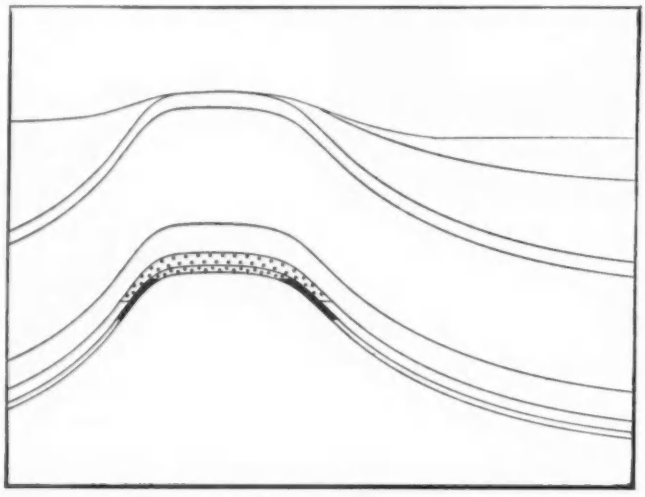


FIGURE 1

*The fold simple, the strata uniform and not faulted*

Dome of Kettleman Hills is the greatest deposit of fluid hydrocarbons yet discovered. No other known field can approach it in value.

### Life of the Field

What is the promised life of the field? That depends upon the rate of production from the field. At the following daily rates of production, as measured in oil alone, we have the corresponding years:

| | |
|---|---|
| 30,000 barrels | 150 years |
| 50,000 barrels | 90 years |
| 100,000 barrels | 45 years |
| 250,000 barrels | 18 years |

We do not know now what rate of production there shall be in the future. Any specified amount can of course be maintained against decline by the drilling of new wells.

More dancing, more singing, more music by the lyres. Leave it to the geologists, the engineers, and their stenographers.

In our conservative moods it is safe to assume that our profile of the region at the North Dome would appear as in Figure 1. Our certain knowledge of the fold is confined to the almost flat top and a short distance only down the flanks. Beyond this section we know nothing. That is why we draw the figure as simply as possible. No misleading information is given and no false hopes are aroused. Our motto is, "What we do not know does not exist." Strata of Etchegoin age appear at the surface of the dome. To the right the valley alluvium covers all. At depth is the Brown Shale underlain by Elliott and Ochsner zones of the Temblor. Numerous lines between the highest and lowest strata are omitted. If we knew where to place a line between the Etchegoin and the Jacalitos, the latter overlying the Brown Shale, we would have put it in, and some gas and oil should be shown here in these post-Brown Shale formations.

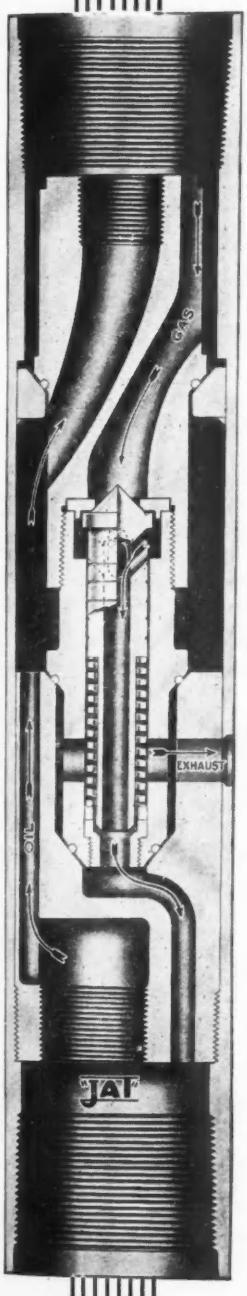
The Temblor formation, as previously noted, is made up of numerous strata differing in porosity and permeability. It appears as a huge layer cake, though no attempt to show this feature is made in the drawing. The upper zone bears the symbol of wet gas and condensate. Possibly normal oil should appear between this accumulated deposit and the water which occupies all off-dome portions of the zone. In the lower zone such normal oil appears. At the top is again wet gas and condensate. The entire drawing is purely diagrammatic; we must take it so in the belief that our knowledge is scant concerning these details. At some distant date we can draw more accurately. With numerous strata in each zone some will reveal different proportions of wet gas, condensate and even normal oil, while the edge water will appear at various levels in the different strata. Wherever the contacts between hydrocarbons and water may have been in the beginning, and wherever they may be now, it is certain that they will be farther up the structure in the future, higher in those strata which are most permeable. The outermost wells seem already to have encountered edge water in some of these strata. For these of course there will be continued production, but water troubles will gradually increase.

The encroachment of edge water is considered by many as an unnecessary evil. It is just the opposite in the fields of California. We can not withdraw gas and oil without allowing water to take its place. It is true that expanded gas occupies more space than compressed gas, and thus for a time during the first expansion the edge water does not move, but this period of first expansion does not exceed a year on the North Dome. For all the years to follow the water will slowly, but surely encroach, barrel for barrel and cubic foot for cubic foot displaced.

If the acreage of the field is 25,000, edge wells must go down 9800 feet to touch the top of the Temblor, and 1400 feet of penetration requires 11,200 feet of hole. This is not an impossibility in future drilling, but why drill such costly holes? The gas and oil will continually pass up the flanks of the structure during production from wells of higher location. We shall not leave these fluids in the ground in failing to drill the outlying wells. Perhaps it would be convenient and expedient to learn the extent of the field in the near future. If such knowledge is worth the cost we are free to make the expenditure. To be sure an owner of an outlying piece of ground wants his share of the gas and oil. Somewhere down the flanks a deep well will be able to return the money invested in drilling and no more; farther down a deeper well can not pay out. We do not know where to place this "pay-line." Where scientists would not ask for the necessary expenditure to locate the line, economists and operators may do so.

Alas, there is so much we do not know. Is that any reason for refusing to speculate upon possibilities now beyond our knowledge? Drilling, with the aid of micropaleontology, may reveal things in this general region as yet unsuspected. The fold shown in Figure 1 is simple. It may instead be complex, as shown in Figure 2. A subordinate structure parallels the main one, and on its top there is provided an anticlinal trap for the accumulation of gas and oil. We would not expect this lateral fold to be as long as the main one; it is merely a secondary "buckling" in the formations which would likely be formed simultaneously with the main one, both being due to the same lateral push originating with the upheaval of the mountain ranges

"JAI"




# DISPLACEMENT PUMPS

**THE ADVANTAGES OF "JAI" DISPLACEMENT PUMPS ◆ ◆ ◆**

**Will pump wells of any depth—crooked or straight.**

**Low lifting cost.**

**Increased production—due to continuous operation.**

**Not effected by sand.**

**Additional gasoline recovery from recycled gas.**

**Eliminates frequent pulling of wells.**

**Can pull vacuum or hold pressure on formation when the need arises.**

**Permanence of compressor plants assured.**

**Sucker rods and standard pumping equipment eliminated.**

**No wear on tubing or casing.**

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***Descriptive Bulletin No. 90 sent on request.***

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# SPECIALIZING IN INVENTING FASTER, CHEAPER MA

Standard B-G Pipe Line Special carries a full 62 h. p. engine—that's 1 h. p. to every 325 lbs. of weight.

95% of all castings are alloy steel—cast iron practically banished. Hot riveted structural frame. Anti-friction bearings in transmission—3-point frame suspension.

10 mechanical digging speeds at his fingertips—3 sprocket changes provide 30 all told—and 2 bucket line speeds.

All chains steel bushed, alloy steel side bars heat treated. Alloy steel heat treated bucket line pins. All shafting of alloy steel, ground accurately to size. All shafts mounted on frame have self-aligning bearings.

Full-length crawlers ride the soft spots easily—easier to steer—easier to handle. Crawler take-ups automatically keep links taut. Crawler sprockets and shoes are of alloy steel heat treated.

# BARBER GR

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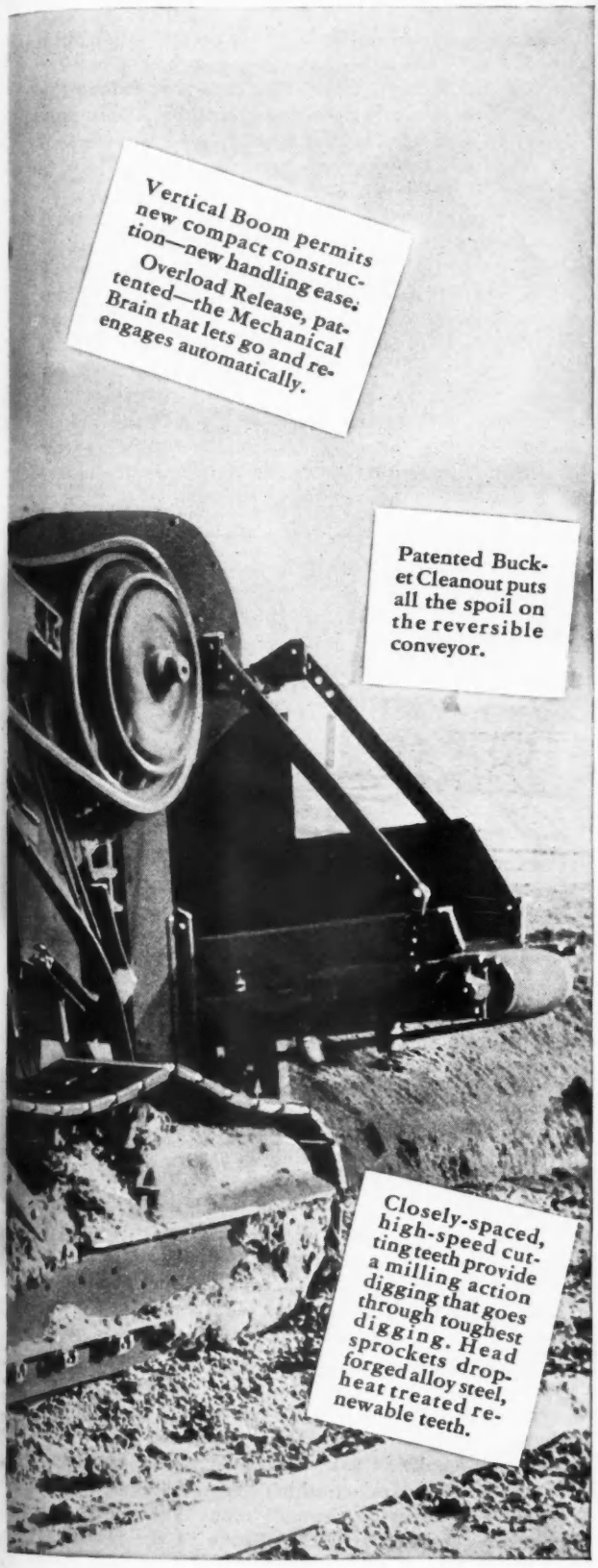
615 West Park Aven

CHINES AND METHODS


Vertical Boom permits new compact construction—new handling ease. Overload Release, patented—the Mechanical Brain that lets go and re-engages automatically.
Patented Bucket Cleanout puts all the spoil on the reversible conveyor.
Closely-spaced, high-speed cutting teeth provide a milling action digging that goes through toughest digging. Head sprockets drop-forged alloy steel, heat treated renewable teeth.

EENE

Aurora, Illinois

# Out of . . the Window with Tradition

## There's Ditch to Be Dug!

In almost every particular this Barber-Greene Ditcher defies the accepted, ancient theories of ditcher design and construction.

Look at it. It is only 202 inches long over all. No ditcher was ever that short before. It has a vertical digging boom—something the accepted theories said couldn't be built.

It carries a Mechanical Brain to ease up the shocks of digging and to end the "slip-clutch" and "breaking bolt" troubles. No one had ever even thought of such a thing before.

The Barber-Greene doesn't dig with shoveling buckets—it mills through even coral rock, macadam pavement, caliche, and similar things as a milling machine cuts through steel. And the Barber-Greene weighs about 20,000 lbs., "ditchside".

The net result of these things, that couldn't be done, is a ditcher that shows higher daily averages no matter how tough the digging may be—that cuts through where others cannot go—that invariably shows lower costs per foot.

Ask for a copy of *Ditching Snapshots and Records.*

• • • • • • • •

Bucket Loaders Coal Loaders Snow Loaders
Loaders with Weighing and Batching Hoppers
Loaders with Vibrating and Grizzly Screens Trailers
Coal and Coke Car Unloaders Belt Car Unloaders
Permanent Belt Conveyors Portable Belt Conveyors
Portable Flight Conveyors Self-Propelled Flight Conveyors
Standard Gas and Water Ditchers Utility Special Ditchers
Pipe Line Special Ditchers Service Special Ditchers

bordering the region on the southwest. Folding of this sort is not unknown; the Teapot Dome in Wyoming is just such a secondary fold at the side of the main Salt Creek field anticline. It is true that many faults there exist in the syncline and up the sides of both folds. We have pictured no breaks of that nature in the present case, though of course they may exist.

Another possibility is shown in Figure 3. A buried thrust-fault lies to the right of the main dome. Longitudinal faulting is, as we say, admitted as a possibility. There is some evidence of such on the sides of the main fold just off the top. The diagram shows an upthrow of Temblor, bringing the formation again within reach of the drill. Perhaps there would be a drag on such a fault, so that there would exist a slight anticlinal fold to the right of the break. In that case accumulation would not depend altogether upon a sealing of Temblor against shale. The fold in itself would act competently as a trap for gas and oil. A thrust-fault would likely be of the same age as the fold, folding and faulting being due to the same lateral pressure. Accumulation provided by faulting then took place subsequent to such faulting. But the future may reveal normal faulting, wherein the arrows in the drawing must be shown in the reversed directions. Instead of a throw favorable to the drill there is one unfavorable. A normal fault is the result of tension; such would consequently be subsequent to the fold, and accumulation might have taken place either before or after the break. If before, we need expect no accumulation lost to us because the drill can not go sufficiently deep. If accumulation took place after normal faulting, or, as we say, necessarily after thrust faulting, we face the possibility of leakage along the fault to porous strata of Etchegoin-Jacalitos age within easy reach of the drill. Thus in finding this oil we would not know whether the deposit is a primary one or a secondary one. Perhaps that would be immaterial to us.

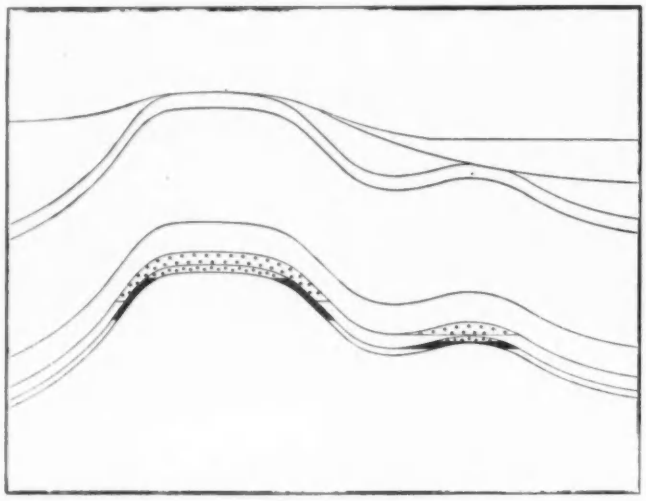


FIGURE 2

*The fold complex, the strata uniform and not faulted*

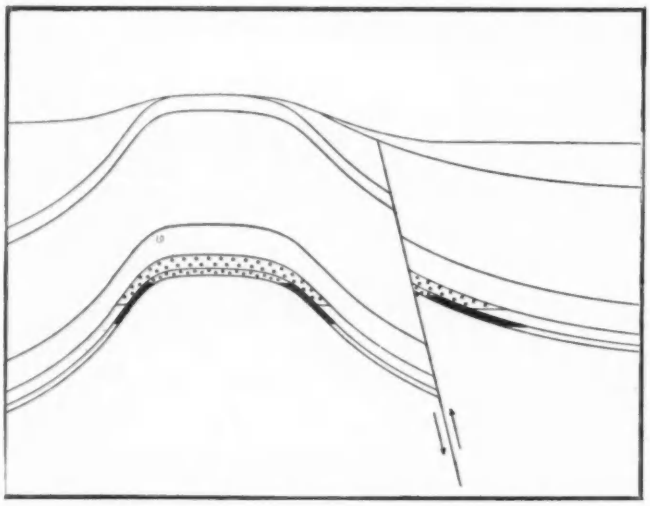


FIGURE 3

*The fold simple, the strata uniform and faulted*

It is interesting to note here in connection with accumulation that all our important oil fields in the world occur on anticlines or on other "trap-forming" structures, small structures on the flanks of great geosynclinal basins. Evidently the basins served as a gathering ground. We are led to suppose that oil in small globules and gas in small bubbles have been pushed along by water acting over great areas, the pushing being a slow process requiring perhaps centuries and ending for each globule and bubble only when these have happily lodged in the trap where the water can no longer move them. Instead the water moves onward at the base of the trap, bypassing the trapped fluids of lighter specific gravity. The laws of migration and accumulation, like those of production, are matters pertaining to the science of motion. The science of motion is old. We call it theoretical mechanics. Galileo started it; Newton completed it; now it is our problem to shape our containers to the contours of geological structures and to fill these containers with a porous medium, oil, gas, and water. A complex problem, but not a difficult one.

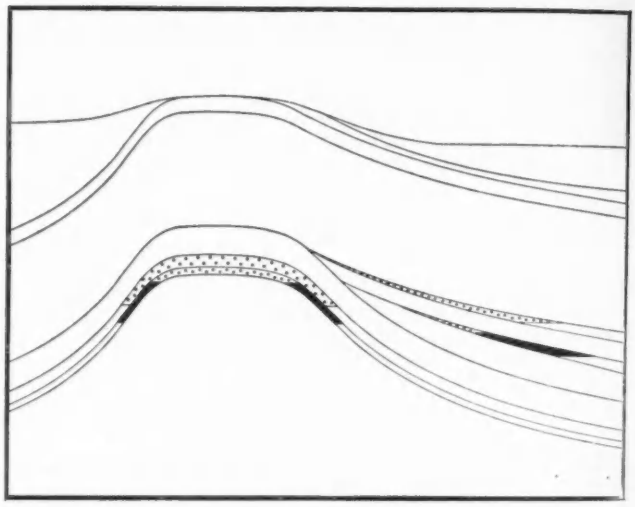
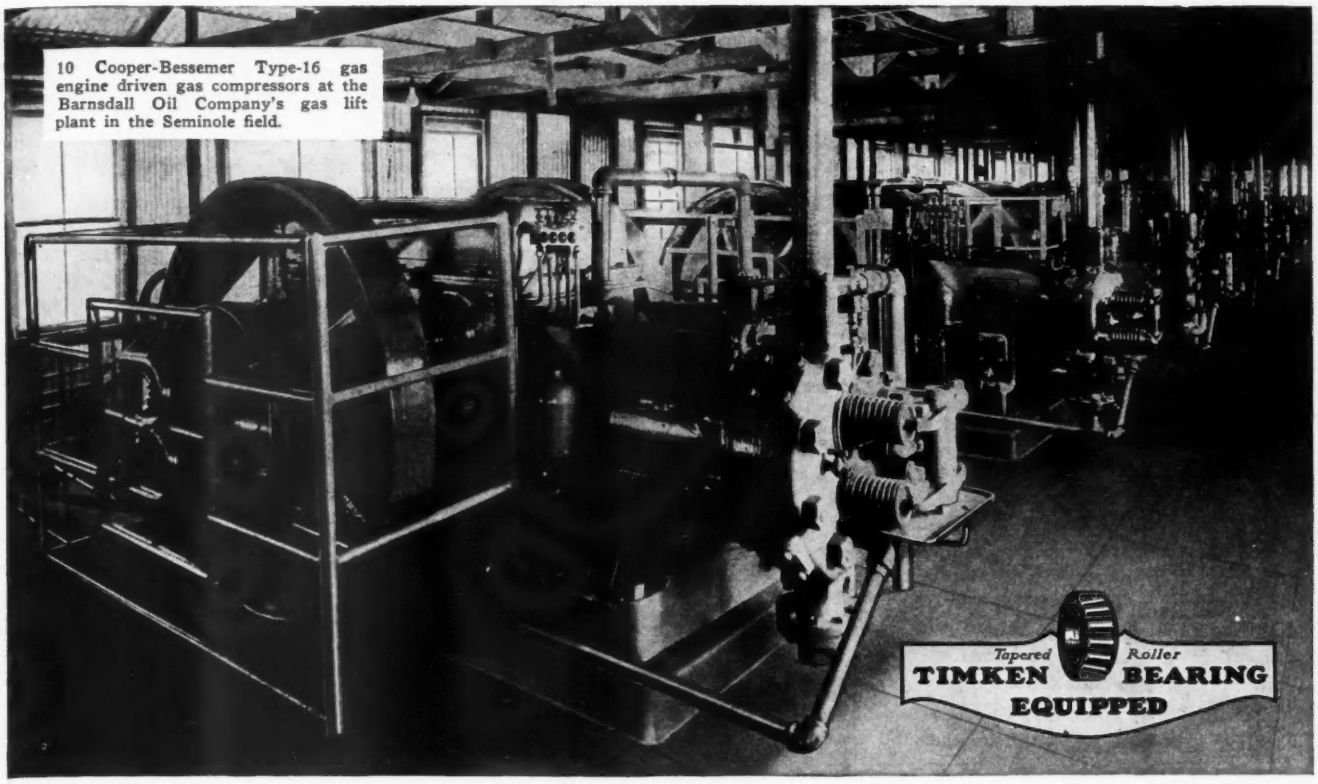


FIGURE 4

*The fold simple, the strata nonuniform and not faulted*

We have neglected an important characteristic of folding in our three diagrams. A fold as large as that of the North Dome, in all probability, was not formed over night. Time was required to bend the strata into their present shape. How much time was required? The safest answer would be to say, "All the years subsequent to Miocene time." An earthquake in a non-volcanic region occupies a few seconds, but the strains, which become adjusted at the time, are due to stresses through many years. As with earthquakes, so it often is with folds, with the result that we have successive bendings throughout ages. In speaking of movements in the earth's crust one geologist has said, "Once a line of weakness, always a line of weakness." We are inclined to believe that "always" may be too long a time; nevertheless the idea is clear. And whether the result is bending alone or bending with faulting is a matter

(*Continued from page* 65)




10 Cooper-Bessemer Type-16 gas engine driven gas compressors at the Barnsdall Oil Company's gas lift plant in the Seminole field.

# The crank shafts of Cooper-Bessemer Type-16 50-60 B. H. P. gas engines are mounted on Timken Bearings to assure utmost dependabilty, maximum power delivery, long life and low maintenance expense.

On the scores of these engines placed in service during the past 3 years there has never been a case of main bearing trouble.

Timken Bearings in service on two other types of Cooper-Bessemer engines show the same enviable performance.

No wonder more and more engine builders are adopting this modern refinement. No wonder more and more engine buyers are specifying "Timken Bearing Equipped". The Timken Roller Bearing Company, Canton, Ohio.

**TIMKEN** *Tapered Roller* **BEARINGS**

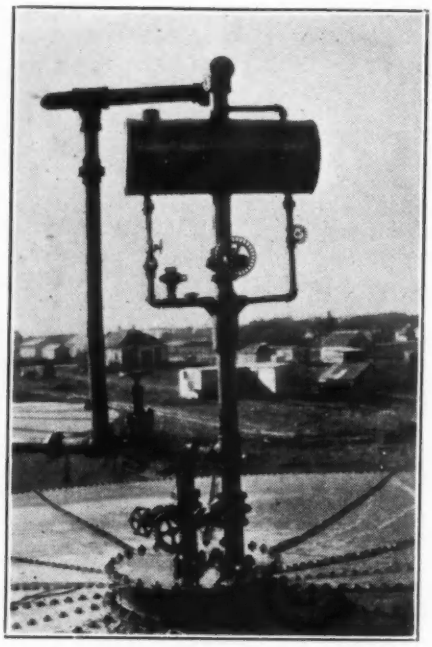
# Device Lowers Cost of Treating Oklahoma City Cut Oil

By R. T. BAKER

THE steady increase in the flow of water and the accompanying increase in the amount of cut oil produced has been a serious problem for Oklahoma City producers. It has been met in a satisfactory manner by Indian Territory Illuminating Oil Company, which is using a new treating device enabling them to make substantial savings in producing pipe line oil from tank sludge and emulsion.

This device is known as the Vapo Treater, designed by Tom Brewer, member of the treating staff of Indian Territory Illuminating Oil Company. It is distributed and manufactured by General Oil Tool Company, with shops at Seminole.

As an indication of the importance and value of the device, Lee Talbot, treating engineer for the former company, declares that during December, 1930, his staff in the Oklahoma City field treated 200,000 barrels of oil for pipe line acceptance from emulsion in that area with a cost of .37 cents per barrel. This figure includes the cost of the treating material, time, and equipment. Methods which had been in use previously had cost from one to four cents per barrel of pipe line oil produced.

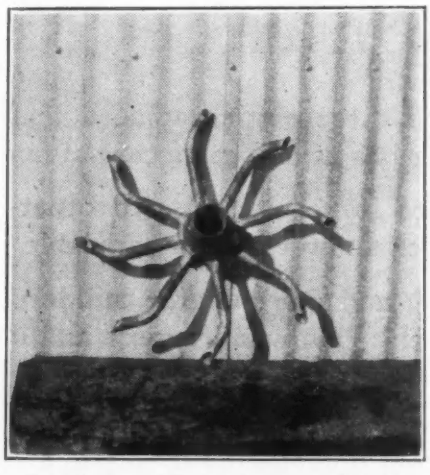


*Vapo treater, showing connections*

The Vapo treater consists of two parts. The first is the treater proper, consisting of a six-gallon container for the treating chemical, with a two-inch line passing through it and a gate valve between the container and the manifold. When this gate is opened it allows a full two-inch blast of steam to pass through the manifold to the bottom of the tank to heat the oil and tank contents. The treater is placed on top of the tank containing the oil to be treated.

The second part of the device is a spider or diffuser connected to the steam line and placed on the bottom of the tank. It has eight outlets and is so constructed that a tank can be heated in a short time without scorching or steaming off valuable portions of the oil and at the same time producing a fairly uniform temperature through the entire body of oil.

Connections have been made and spiders placed on the bottom of several hundred of the stock and field or lease storage tanks of Indian Territory Illuminating Oil Company in the Oklahoma City field. The device will treat emulsions successfully in lease tanks up to 1600 barrels capacity, Mr. Talbot says.



*Distributor placed at bottom of tank*

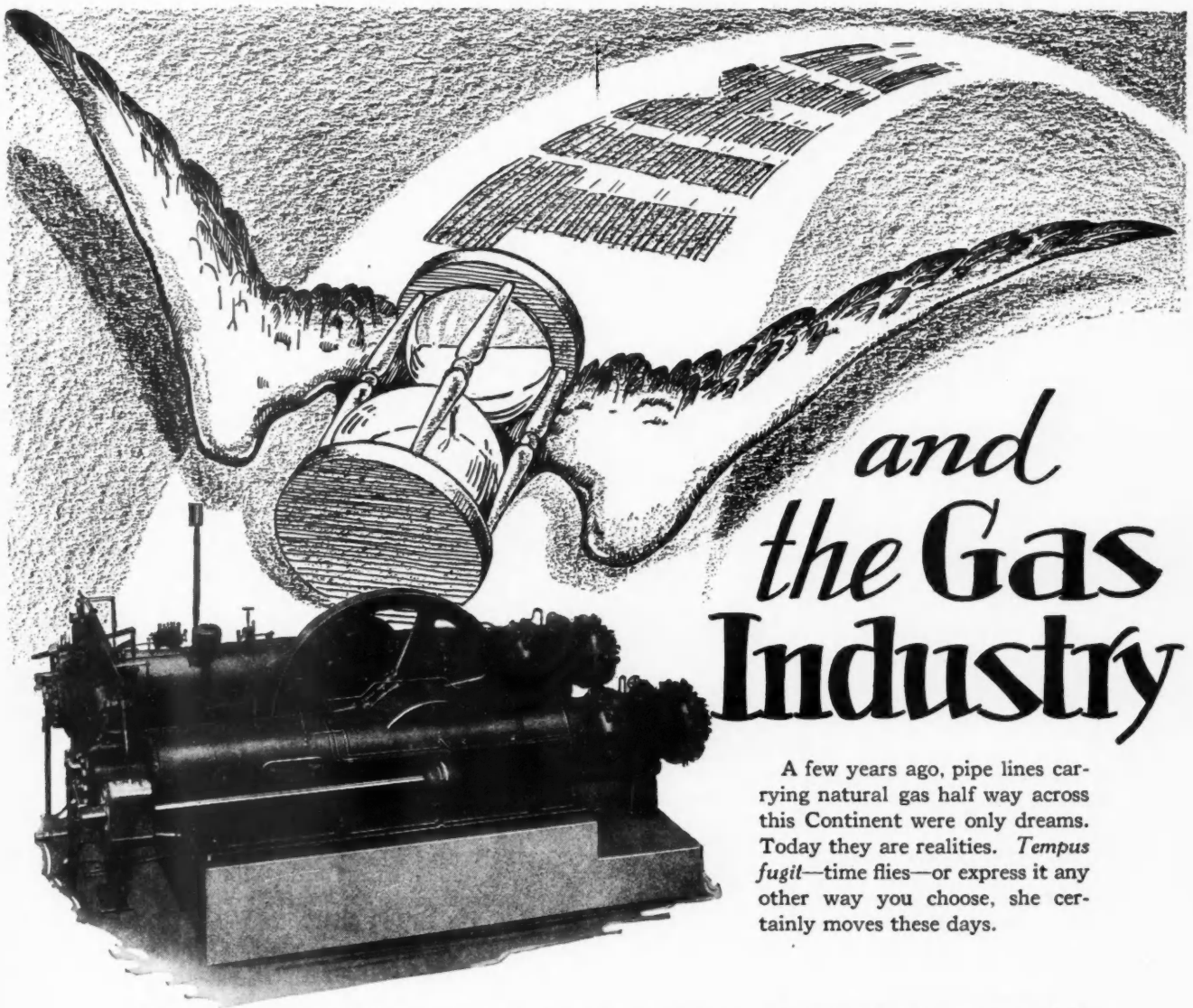
### How It Works

After heating the tank of oil to the proper temperature, through the open flow of steam, the gate below the container on the device is closed, and the gate on the half-inch line, by-passed from the two-inch line above the container, is then opened. This small line is welded through the container to the vaporizing jet in the manifold. Both steam lines passing through the chemical container, keep the contents warm, thus making it easier for it to be vaporized.

On the opposite side of the manifold from the half-inch steam line is a half-inch line for the chemical and air. This has a sight feed with a needle valve to regulate the amount and speed of the flow of the chemical to the manifold, or vaporizer. After using the required amount of chemical, the air valve on the chemical line is opened, to increase agitation in the tank and diffuse the chemical more thoroughly throughout the body of the oil. The flow of steam through the mixer or vaporizing chamber, produces a vacuum on the chemical air line, requiring the attention of the operator to regulate the flow by means of the valves on the line.

This mixing chamber is the most important part of the entire device, as it is here that the chemical is vaporized and introduced in the proper form for most successful treating work. The spider, or vapor distributor, at the bottom of the two-inch steam line, is also unique and interesting. The bottom is made from a two to three-inch swedge, with a plate welded at the end for it to rest on. Eight half-inch nipples are welded to the side of the three-inch, spaced equally and turned at a 30 degree angle in order to give the oil a circular motion, when impelled by the flow of steam.

Average loss in gravity as a result of producing pipe line oil from the emulsion in the Oklahoma City field amounts to .4 to one degree, according to Mr. Talbot. He is well



# *and the* Gas Industry

A few years ago, pipe lines carrying natural gas half way across this Continent were only dreams. Today they are realities. *Tempus fugit*—time flies—or express it any other way you choose, she certainly moves these days.

Uninterrupted service to the consumer has been given so much attention that to-day gas is probably the most reliable fuel. Truly, natural gas is in the public eye as never before.

Of course, this advance in the gas industry has called for a corresponding advance in equipment to handle it.

The TRANSIT 17 x 24″ Twin Gas Engine-Gas Compressor was brought out to meet a definite demand for a thoroughly reliable up-to-date engine of this size and type. TRANSIT ENGINES have always been noted for their long life. Many of the first gas engine compressors built over thirty-five years ago are still in daily service. Strength is there by reason of correct design and not by a lot of unnecessary metal.

TRANSIT ENGINES are built strong—for long life.

Send for our 48 page catalogue on this compressor.
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satisfied with the device and expects to be able to show excellent results from its use as continued proration makes economy measures necessary and encroachments of water with the production makes some kind of treating obligatory.

### Used Elsewhere

The idea for the treater has been utilized by Mr. Brewer in other areas as well. In the Wichita, Kansas, area the device was used to prepare production for pipe line, amounting on some days to as much as 40,000 barrels. In the treatment of old settlings in storage tanks also, Mr. Brewer points to an experience at Blackwell. A refinery there had 40,000 barrels of almost solid settlings which they had been unable to treat in any manner for recovery of good oil. Mr. Brewer batched the stuff, 500 barrels at the batch, and recovered 14,000 barrels of pipe line oil from the mass.

In processing the emulsion or settlings, Mr. Talbot points out that it is essential to bring the temperature of the oil up to a point usually between 120 degrees and 130 degrees F. This is done by introducing the open flow of steam into the tank through the spider or distributor at the bottom. It usually takes from 30 minutes to one hour to prepare a tank, depending upon its size, character of contents, etc. Sufficient air is admitted also to reduce the heat from the steam so that the contents of the tank will not be scalded.

In the Seminole area, he has found that it is necessary to introduce a six-inch layer of water at the bottom of the tank, so that the live steam will not scald and ruin the oil. After the oil is heated, it requires only a few minutes to introduce the treating material, and then to agitate with the air and steam. In a few minutes the water and sand can be removed from the bottom of the tank, and the pipe line oil remaining can be pumped away.

Inasmuch as the container and connections weigh only 60 pounds, one man can treat several tanks in the course of a day. Several kinds of treating materials can be used in the device, the choice resting on the one which produces the best results for the batch to be treated. The feature of the device lies in its relatively low original cost, its portability, and its economical use of treating materials.

Mr. Talbot points to the introduction of the spiders in the stock tanks and a small amount of two-inch line and a few fittings as the only expense for equipping the tanks for treating. An expensive treating plant on each lease formerly was necessary. He figures that the device has saved his company $12,000 in equipment, in addition to a large labor saving and a large saving in the cost of treating materials.

# Use Steel Square for Finding Length of Belt

By W. F. SCHAPHORST, M. E.

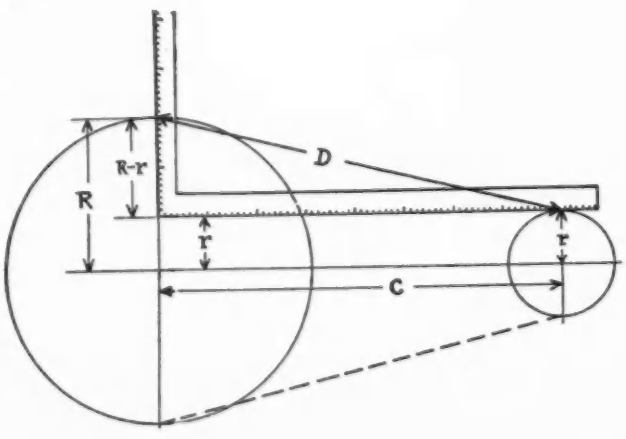
HERE is a quick and sure method for finding the length of any open belt. It is more accurate than most of the rules ordinarily used for computing belt length.

Along one edge of the steel square lay off the distance C which is the distance between shaft centers. For convenience, you may let one inch on the steel square be the equivalent of one foot.

Then along the other edge of the square lay off the distance (R - r) as shown in the sketch. This is the "difference in the radii of the two pulleys." Let one inch on the scale equal one foot as before.

Then measure the distance D between those two points which you have located. As is obvious in the sketch the distance D is equal to one of the diagonal lengths of the belt. The other diagonal is indicated by the dotted line on the other side of the pulleys.

The distance D is easily measured by the same steel square by marking the located points on a flat surface, or by means of a ruler or tape or any other convenient method.




Now to find the total length of the belt we must merely multiply the distance D by 2 and then add one-half the circumference of the large pulley and one-half the circumference of the small pulley. The sketch shows clearly why this is true.

Or, putting it in the form of a rule, add the radius R of the large pulley to the radius r of the small pulley and multiply the sum by 3.1416. To this add twice the distance D. The result is the length of the belt.

In view of the fact that steel squares are usually graduated in sixteenths or eighths of an inch, the following table will be found handy when one uses the scale, 1 in. 1 ft. Thus:

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1″=1.3 | sixteenths | on | the | square | 7″=9.3 | sixteenths | on | the | square |
| 2″=2.7 | " | " | " | " | 8″=10.6 | " | " | " | " |
| 3″=¼ | inch | " | " | " | 9″=¾ | inch | | | |
| 4″=5.3 | " | " | " | " | 10″=13.3 | " | " | " | " |
| 5″=6.7 | " | " | " | " | 11″=14.7 | " | " | " | " |
| 6″=½ | inch | " | " | " | 12″=16 | " | " | " | " |

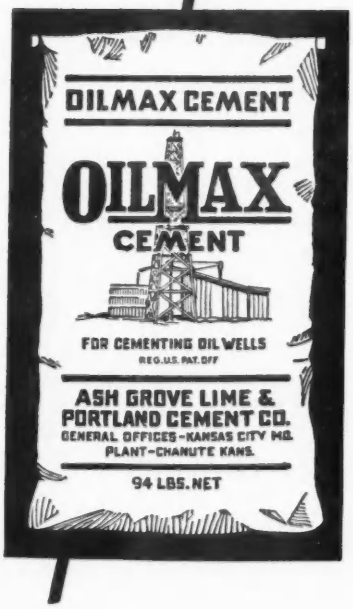
For example, if it is found that the distance D is 20 inches and 13.3 sixteenths on the steel square, the belt length represented by D is 20 ft. 10 inches. Isn't that simple enough?

Of course when making these computations it is not necessary to draw a sketch as I have done. I have drawn this sketch merely to make every step clear and to show why this method works out with such certainty. All that is necessary is to know the radii of the two pulleys and the distance between shaft centers. Then the steel square and the rule given above will do the rest. What the steel square really does is—it eliminates the necessity of extracting the square root for making accurate belt length computations. Extracting roots is an irksome operation which most of us heartily dislike.

A modification of this method is: use a steel tape in place of the steel square. A steel tape is usually long enough so that it is not necessary to employ a reduced scale. That is, with a tape line you can lay it all off "full size".

*C. C. Julian well, Oklahoma City field . . . cemented with Oilmax.*

# Why OILMAX CEMENT GIVES BETTER PROTECTION AGAINST MUD CONTAMINATION




CONTAMINATION by drilling mud causes a large percentage of cementing failures. Even a *small amount* of mud will *weaken* your cement and leave it *highly porous.* Oilmax Cement slurry reduces the danger of contamination because *less* mixing water is required to give efficient, non-abrasive pumping consistency. Less water means a heavier cement slurry with greater ability to displace mud.

Oilmax Cement gets as strong in 24 hours as ordinary Portland Cement in 10 days and *continues* to gain in strength . . . no admixtures or accelerators are required. It is water-tight, non-shrinking . . . flows into every crack and crevice without bridging. Give your oil well investment OILMAX protection. The best is always cheapest! Oilmax Cement is obtainable thru dealers.

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**OILMAX CEMENT**

**SPECIALLY PROCESSED for OIL WELL CEMENTING**

# WORLD PETROLEUM IN REVIEW

## *Soviet Announces Oil Production Has Reached Goal Of Five-Year Plan Ahead of Time*

Announcement has been made by Soviet officials in Moscow through the New York Times Service of the attainment of the Five-Year goal insofar as the Russian oil industry is concerned in a period of two and one half years.

The Five-Year Plan, commenced on October 1, 1928, contemplated that the socialized oil industry would reach an average production of 57,000 tons (410,400 barrels) per day by October 1, 1933. Current production, according to this announcement, approximates 58,000 tons (417,600 barrels) per day, or 1000 tons per day more than the figure originally set as the Five-Year goal.

It is said that oil production for the current year will approximate 27½ million tons (198 million barrels), or 6,700,000 tons (48,240,000 barrels) more than originally was planned for the fiscal year ending late in 1933.

Based on these successes, as claimed by the Soviets, a new and higher figure has been set for 1933 production, it being the present intention of the Soviet oil industry to produce 46 million tons (331,200,000 barrels) of oil during 1933.

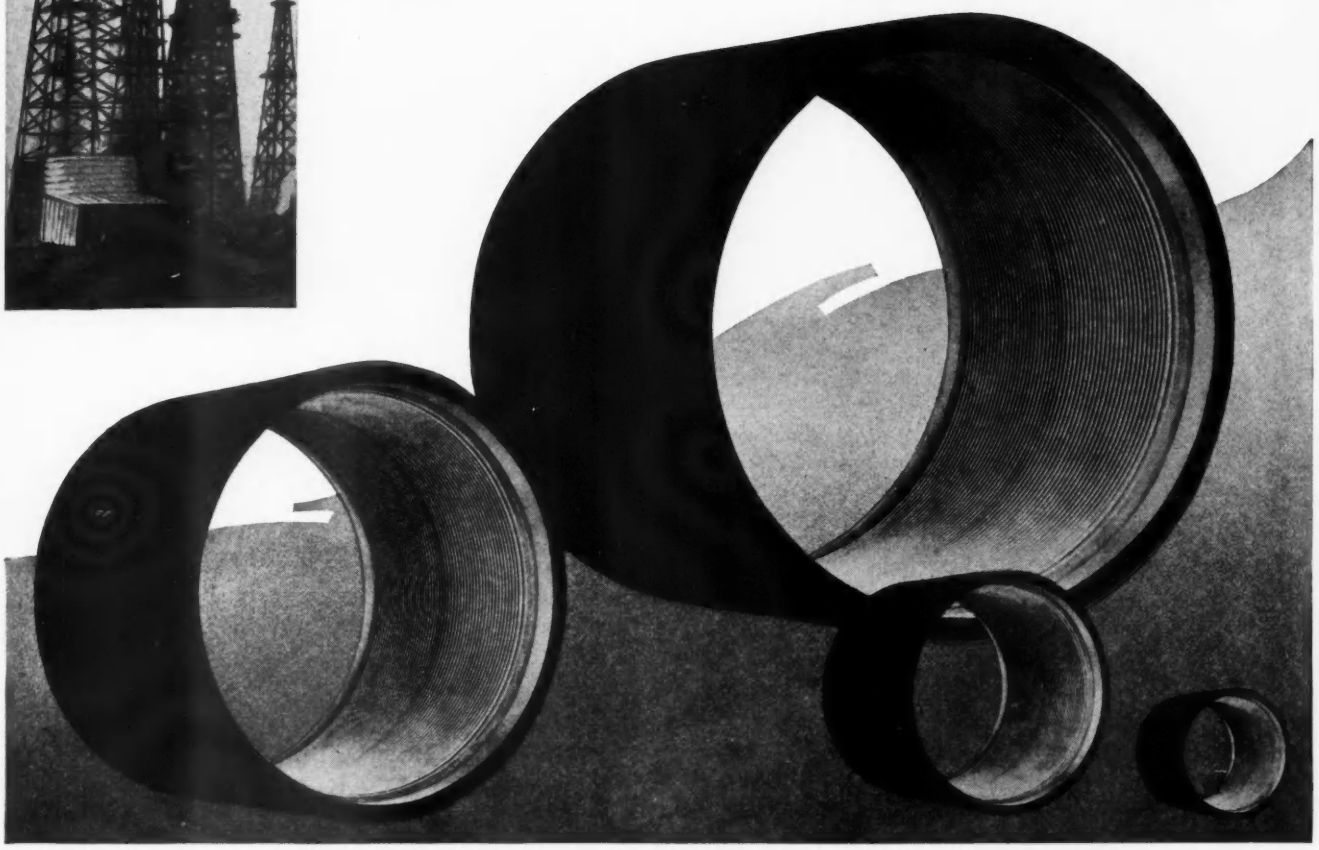
The accomplishment of this revised plan will require that production be increased to more than 1,000,000 barrels per day during the concluding year. Indeed, it will require that production be maintained at an average of more than 940,000 barrels per day, or two and one quarter times the current average, throughout the fifth year.

It is interesting in this connection to quote from recent remarks by Sir Henri Deterding, managing director of Bataafsche Petroleum Maatschappij and other Royal Dutch-Shell subsidiaries, published by The Petroleum Times, of London, who brought out the point that "The successful curtailment endeavors in the United States, and similar results in Venezuela, Mexico, Persia, Dutch East Indies, Colombia, and elsewhere, have been largely neutralized by the unrestricted production and export activity in Soviet Russia. Although the Russian petroleum exports would seem to be comparatively small in relation to the world's petroleum production and trade, they suffice to destroy equilibrium in the world's oil markets and to demoralize the price situation.

"The danger to stability of the world's oil markets," he said, "does not rest so much on the quantities of Russian oil exported, but on the fact that these exports are made without regard to economic and commercial principles. Having acquired possession of the petroleum industry with-

THE PICTURE—The Runcu Field in Roumania.

# Are you using the right Coupling?



YOU want your piping to be equally sound and trustworthy at every point. And you want to retain in all reconditioned parts the same high quality that you have in the original string of NATIONAL A. P. I. Drill Pipe, Casing, Tubing or Line Pipe. To provide for this, be sure that you are using the right couplings.

NATIONAL Seamless Steel Couplings are made with utmost care and by highly developed processes, to give you maximum service. They are so designed as to insure correct alignment, meet the most exacting thread standards, reduce galling to a minimum, and set up good, tight joints as a result. They preserve interchangeability, resist deformation in supporting long strings, minimize abrasion of threads where unjointing is necessary, and in general, raise the standard of joint-making practice.

Actual experience proves that these couplings match all the well known virtues of other NATIONAL products for satisfactory installation, structural reliability, and long life.

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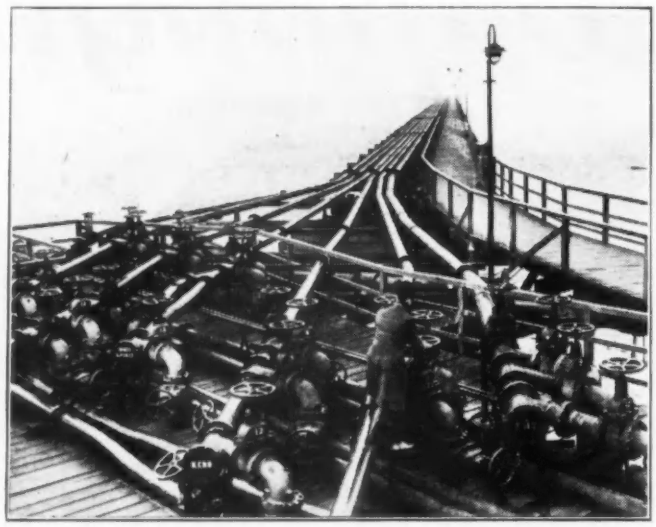
out compensation, the (Soviet) industry is free of amortization costs; the wages in the industry, paid in inflated money, are lower than the pre-war wages, if measured in buying power. The exchange necessity[1] over-rides all other considerations, and so long as Russian oil exports are made under these conditions, stability in the oil markets is not possible."

[1]He refers to the Soviet's necessity for obtaining gold or sound foreign money, by the sale of oil and other commodities, for use in the purchase of machinery and equipment for the carrying out of the Five-Year Plan of industrialization.



*Where oil from all parts of the world enters England—shore end manifold of the tanker dock at Saltend, Hull. (Paul's Photo).*

### *Mosul Development Question Revived*

Paris, France. — The Chamber of Deputies has revived the question of ratification of the oil conventions for exploitation of the French share of the Mosul oil fields. The article as it now stands gives the government the right to buy at current prices, and also provides that 25 per cent of the needs of France must be purchased from government-controlled Compagnie Francaise des Petroles.

The resolution that has been presented for legislative approval asks for the right to farm out its oil rights to a private company and second, the right to create a French refining monopoly, assuring the government an option on a percentage of output in case of necessity. The government is arguing for ratification upon the grounds that France must necessarily be freed from dependence upon foreign powers for her oil in time of war.

The four principle arguments to be advanced in favor of ratification are: 1. limitation of the influence of Anglo-Saxon trusts which imperil an industry of great national interest; 2. to remedy as much as possible the present price disorder; 3. to give to France a refining industry which it presently lacks; and 4. to put into use the share of Mosul oil granted to France by the San Remo treaty. The San Remo treaty decreed that the stock of the Iraq Petroleum Company was divided between France, England, United States and Turkey. France obtained 25 per cent of the oil to be developed in the new fields. The over-production of oil has curtailed operations of British and American operators to such an extent that they do not seem to be anxious to develop these holdings but France is particularly anxious to start development of the territory in order to establish a source of supply that will make her independent of England and the United States from whom she has had to purchase the majority of crude petroleum and petroleum products.

### *February Production Shows Increase*

Maracaibo, Venezuela. — Although figures for the total monthly estimate of production show a decline, actual daily average production establishes an increase of 3816 barrels over January. Total crude production for February was recorded as 9,486,327 barrels compared with 10,384,451 barrel for January, a daily average of 338,798 barrels for February against 334,982 barrels for January. Production for February of 1930 was 10,898,535 barrels, a daily average of 389,233 barrels. The total for February of this year is the lowest for any month since September, 1928, when the output totaled 9,477,503 barrels.

Venezuelan Oil Concessions continued to lead production for companies with a total of 2,801,699 barrels while Lago Petroleum Corporation was second with 2,648,921 barrels.

### *Petroleum Marketing Negotiations Pending*

Moscow, U. S. S. R.—Negotiations for marketing Soviet oil and gasoline in South Africa are practically completed. These negotiations call for large-scale marketing of petroleum with the Soviet government giving financial aid to insure the success of the deal. Heretofore Atlas Petroleum Products, Ltd., which has been operating on a concession granted by the Naphtha Syndicate of Russia has been unable to compete with the American and European companies marketing in this area. Sufficient money has been made available by the Soviet government for Atlas Petroleum Products, Ltd., to carry out plans for entering the marketing field in competition with these other companies.

### *Mexican Eagle Oil Operations*

Mexico City.—A statement by the chief executive of Mexican Eagle Oil Company shows that the company's refinery at Tampico is running 24,500 barrels of crude oil to the stills daily, as compared with a daily average run at this time last year of 38,600 barrels. His statement also revealed the fact that 66 per cent of the company's gross earnings in 1930 was received by the government in the form of taxes.

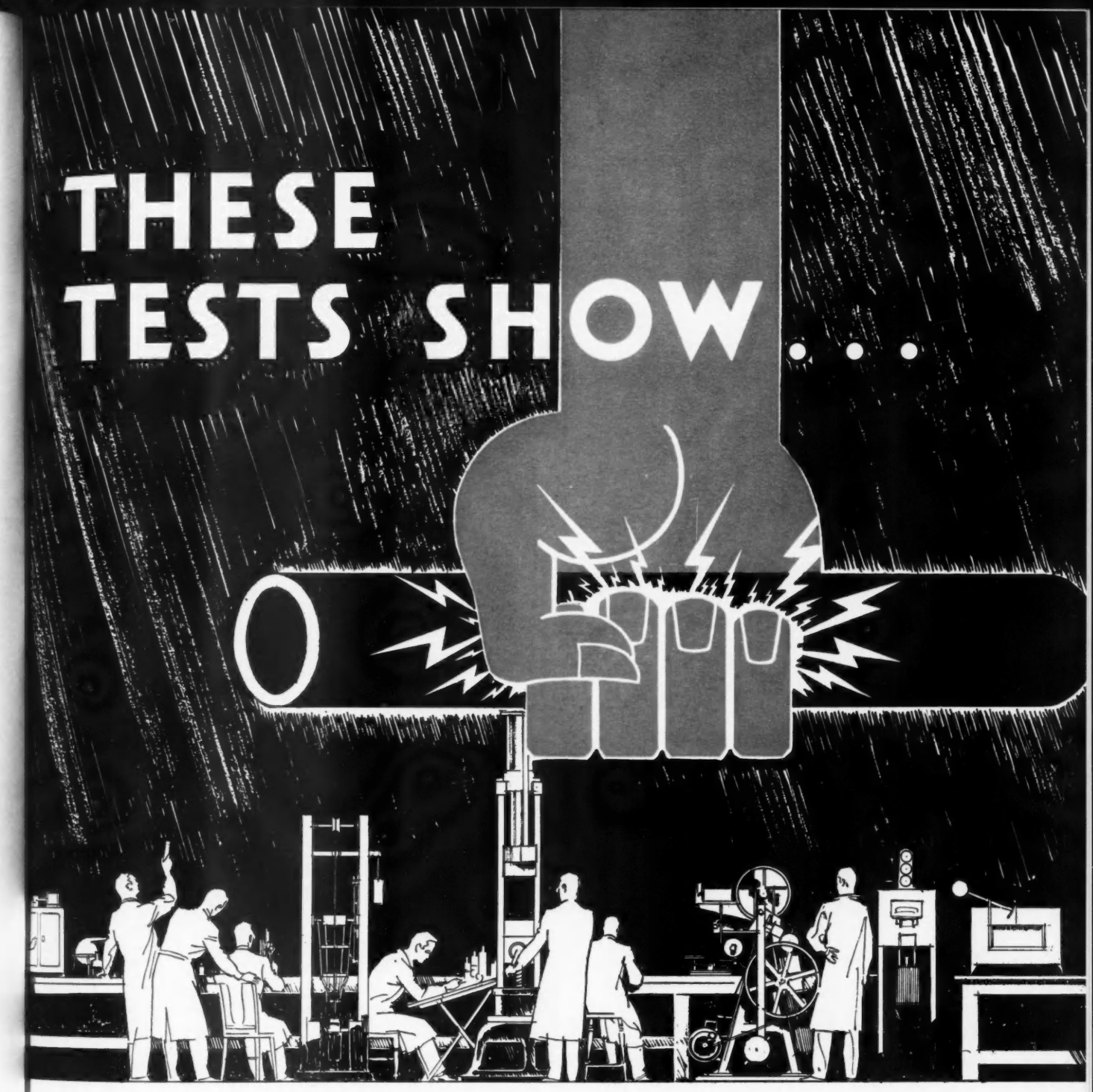
The statement declares that unless the government assists the industry it will be necessary for oil companies to restrict operations further and reduce personnel. Under the existing conditions of the petroleum industry it is evidently more profitable to import crude petroleum and gasoline from South America than to produce it in this country.

### *Silva Discovery May Open Field*

Maracaibo, Venezuela.—Completion of Union National Petroleum Company's Leon 1 as a 1,000,000-foot gas well in the district of Silva, State of Falcon, gives indications of a large potential field being opened in this district. The well which was drilled to 2680 feet caught fire and burned for four days before being extinguished. New Equipment, including a rig to replace the one destroyed by fire, has been moved in and operations have been resumed.

It is located on acreage of Pantepec Company of Venezuela. This company has holdings totaling over 300,000 acres in the State of Falcon, 90 per cent of the acreage is in the area surrounding the new well.

Geologists are of the belief that this area is one of considerable prospect since it is a north offset to two producing districts, Mene del Salto and the Pecon fields. A pipe line to the harbor runs across part of the concession and a railroad on the southern part of the concession will aid development work for the discovery.

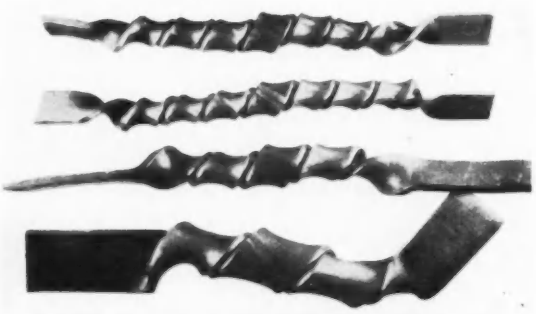



# REPUBLIC
# *ELECTRIC WELD*
# PIPE

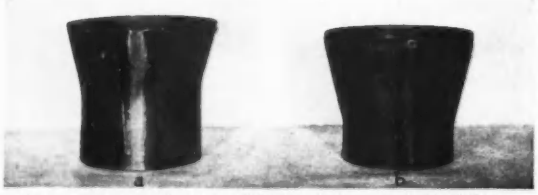
MADE BY A NEW PROCESS
CONTROLLED EXCLUSIVELY BY
REPUBLIC STEEL CORPORATION
YOUNGSTOWN . OHIO . . . . .

# WHY REPUBLIC *ELECTRIC WELD* PIPE WITHSTANDS PUNISHMENT IN THE FIELD...

Tensile test on strip cut from Electric Weld pipe. Note the ¼ in. diameter notches at the weld. Break did not occur at weld.



Twist test with weld at right angles to axis of test strip. Two upper test pieces are from pipe 6-⅝ in. O. D. x 0.218 in. Two lower are 6-⅝ in. O. D. x 0.250 in.



Pipe A is 6-⅝ in. O. D. x 0.250 in. thick, expanded to 8-⅜ in. O. D. Pipe B is 6 in. O. D. x 0.156 in. thick, expanded to 8-3/16 in. O. D. Both are Republic Electric Weld pipe.

Twist test with weld longitudinal through center. Upper test piece is 13/16 in. wide and has been given seven twists; lower is 1-½ in. wide, given four twists.

Only those who have had intimate contact with pipe line work know the variety and the extent of the stresses to which line pipe is subjected in use and during handling.

Engineers and field men who know from experience the value of high tensile strength and ductility, and the advantages of uniform wall thickness and proven welds, will be interested in the results of the tests illustrated here.

While the usual hydrostatic and crushing tests are sufficient for the protection of the buyer in routine pipe production, these "abuse tests" are of value, illustrating as they do the unusual qualifications of Republic Electric Weld pipe, proving its strength of metal and weld, its ductility, its working qualities and its ability to take punishment in the field.

*Details gladly mailed on request.*

Vanstoning quality of electric weld pipe 6-⅝ in. O. D. x 0.250 in.

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# Markets • Production • Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

## East Texas Production Continues Upward Trend

While United States daily average crude oil production for the week ending March 28 only showed a net gain of 7300 barrels, East Texas production recorded another gain of 30,550 barrels a day. New well completions in the East Texas area of Joiner, Kilgore and Longview continue to accelerate new oil production to the extent where the rate of increase each week overshadows the rate of the preceding week. During the week ending March 21, the rate of gain was about 25,000 barrels daily from this new area; last week the rate increased to more than 30,000 barrels; next week it may reach a gain of 40,000 barrels. The three active districts comprising East Texas are now producing at the rate of 122,100 barrels daily; during the preceding week the rate of daily production was 91,550 barrels. As a result, Texas showed a gain in production last week of 32,200 barrels daily, the only other increase reported in the United States being in the Eastern states.

On the basis of the former allowable output of 644,000 barrels, Texas is now charged with an excess production of 121,200 barrels daily. The excess for the United States amounts to 213,350 barrels, representing the difference between prescribed and indicated allowable production and actual production for the week ending March 28. Oklahoma is charged with an excess for last week of 87,800 barrels, while California's excess production amounts to 30,400 barrels. These figures are significant at this time, particularly in view of the present state of the crude market and it is evident from the facts at hand that East Texas has played a prominent part in piling up an unfavorable surplus in Texas that has proven of dire consequences in the Mid-Continent as well as the national crude market.

Decreases in production were reported last week by Oklahoma, Kansas, North Louisiana, Arkansas, Rocky Mountain States and California. The largest decrease was credited to Oklahoma, amounting to 19,300 barrels. The net result for the United States was a gain of 7300 barrels, further boosting the production curve to a total of 2,275,350 barrels daily. It will be noted on the accompanying chart that the production curve is rapidly nearing the dotted line indicating the extreme economic limit for the United States.

Some time ago it was pointed out in this section that the demand for crude this year would warrant maintaining the national daily average crude production at 2,328,000 barrels. At that time, it was not definite just how important East Texas would become in the economic picture. In its present status, however, East Texas will apparently continue to pile up new production at a rate which must soon boost the production curve of the United States to a point considerably above the danger line. In the meantime, other sections of the United States are having their markets and price structure upset and the ultimate result, if the present trend continues, must take an even greater financial toll from the industry as a whole. It goes without saying that East Texas is heading not only the industry but itself as a unit in the industry, toward demoralization that cannot fail to result in serious losses of both a physical as well as a financial nature.

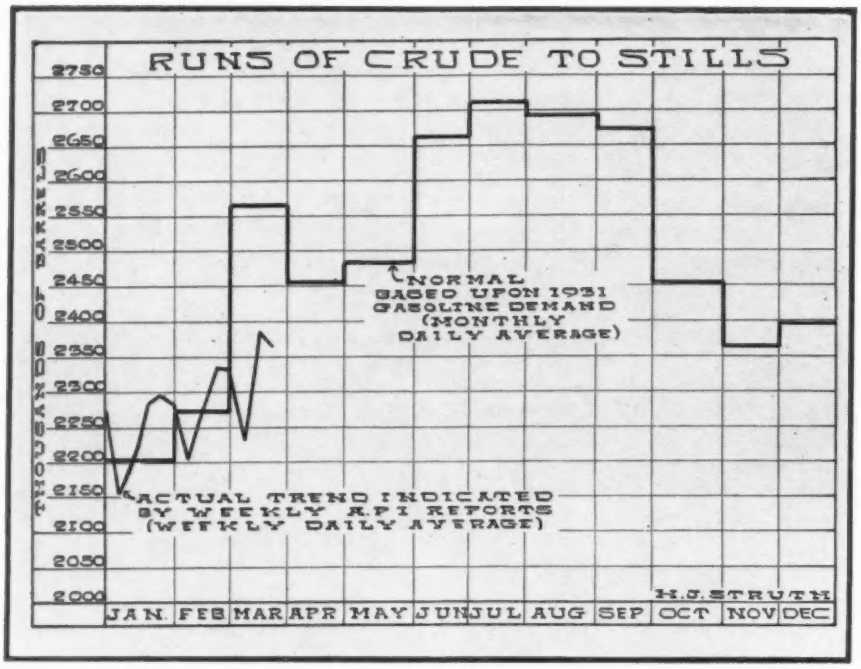
Unless equitable proration is enforced in East Texas there is every reason to believe that the industry will face a virtual panic that may prove to be the most severe crisis in the present cycle of depression. Whether or not operators in East Texas realize their position in the economic picture, it is evident that it will take a strong outside force to convince many that their fight against being prorated is but a fight against their future welfare. Looking at the situation purely from a viewpoint of economics and dollars and cents it is obvious that any further delay in arriving at a compromise on proration for East Texas spells ruin and unwarranted waste. It is up to the railroad commission and the legislative powers of the state of Texas to take action on this matter not only for the benefit of the public and the oil industry at large but also for the benefit of East Texans who fail to see the folly of quickly exhausting the stability of their new-found natural wealth.

## California Gas Price War Undermining Crude Market

Announcement of a third revision in California crude prices by Union Oil Company on March 30, placed a new economic interpretation upon the industry's market structure. The price war in the gasoline market in California has completely upset crude valuations to the extent where light crudes are no longer sought after and heavy oil is being placed to the forefront by over-supplied refiners. Under the new schedule posted by Union Oil Company, high gravity crudes have been placed on a low, flat price basis, commanding an average value of 35 cents a barrel. The heavy oils now command a value of as high as 65 cents a barrel, with differentials reversed to reduce the value of higher gravity oils on the upward scale to the extent of three cents for each degree.

Cut-throat competition in the retail gasoline market in California has practically demoralized the market structure there in all its divisions. The advent of high gravity oils in the Los Angeles Basin fields, as well as that obtained at Elwood, has been gradually changing the economic picture in California. Cracking, at first slow to invade that state, has shown remarkable strides during the past year with the result that even under restrained production and manufacturing, the yield of gasoline from crude has been appreciably increased. Then, too, Kettleman Hills crude has shown enormous possibilities for increased gasoline recovery, by reason of its unusually high gravity and volatile constituents. For years, large quantities of heavy crude have been held in storage and considered practically worthless as raw material for the refineries. Now, with heavy crude

# MARKET SECTION




displacing light crude as refinable material the order of things has been completely reversed.

Whether or not the new order of things in California will correct the unbalanced situation is problematical. At any rate, with high gravity, high gasoline content crudes selling at a low figure of only 35 cents a barrel, it is obvious that many refiners will consider it an opportunity to redouble their efforts to flood the market with cheap gasoline. The new price schedule undoubtedly offers such an opportunity. With gasoline selling at retail in Los Angeles at from five to 10 cents a gallon, the average price being about nine cents, it is apparent that the industry there has entered upon an orgy of wasteful and unprofitable procedure such as has never before been known.

There is no denying the fact that a small amount of oil produced in California is not finding a ready market. During the past, it has been the custom to "soft pedal" any rumors that such-and-such's oil was being sacrificed at a figure below the market, but conditions are now such that the constructionists who always look through rose-colored glasses cannot become offended at frank statements.

The storage situation in California is bad. There is no doubt about that; but there is a distinct ray of hope in the small daily production. With a state output of around

## Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Week ending March 21, 1931

(Figures in barrels of 42 gallons)

| District— | Potential Capacity (Daily) Total | Potential Capacity (Daily) Reporting | Per Cent | Crude Runs to Stills Total | Daily Average | Per Cent Operated | Gasoline Stocks at Refineries | Gas & Fuel Oil Stocks |
|---|---|---|---|---|---|---|---|---|
| East Coast | 612,700 | 612,700 | 100.0 | 3,216,000 | 459,400 | 75.0 | 8,689,000 | 7,180,000 |
| Appalachian | 141,300 | 132,500 | 93.8 | 658,000 | 94,000 | 70.9 | 1,662,000 | 1,163,000 |
| Indiana, Illinois, Kentucky | 390,800 | 381,000 | 97.5 | 2,122,000 | 303,200 | 79.6 | 5,616,000 | 3,066,000 |
| Oklahoma, Kansas, Missouri | 461,100 | 412,200 | 89.4 | 1,751,000 | 250,100 | 60.7 | 3,473,000 | 3,547,000 |
| Texas | 809,000 | 743,500 | 91.9 | 3,754,000 | 536,300 | 72.1 | 7,767,000 | 8,178,000 |
| Louisiana-Arkansas | 266,600 | 262,000 | 98.3 | 1,015,000 | 145,000 | 55.3 | 1,913,000 | 2,372,000 |
| Rocky Mountain | 150,100 | 139,700 | 93.1 | 336,000 | 48,000 | 34.4 | 1,874,000 | 838,000 |
| California | 898,500 | 887,600 | 98.8 | 3,227,000 | 461,000 | 51.9 | 15,764,000 | 101,347,000 |
| Total Week March 21 | 3,730,100 | 3,571,200 | 95.7 | 16,079,000 | 2,297,000 | 64.3 | 46,758,000 | 127,691,000 |
| Total Week March 14 | 3,730,100 | 3,571,200 | 95.7 | 16,201,000 | 2,314,400 | 64.8 | 45,821,000 | 127,358,000 |
| Total March 22, 1930 | 3,660,900 | 3,497,400 | 95.5 | 17,744,000 | 2,534,900 | 72.5 | *54,078,000 | *137,126,000 |
| **The Texas and Louisiana Gulf Coastal Figures Shown Below are Included Above in the total of their respective districts.** | | | | | | | | |
| Texas Gulf Coast | 529,500 | 529,500 | 100.0 | 2,800,000 | 400,000 | 75.5 | 6,580,000 | 5,923,000 |
| Louisiana Gulf Coast | 147,500 | 147,500 | 100.0 | 679,000 | 97,000 | 65.8 | 1,719,000 | 1,330,000 |

* Revised due to change in California.

# MARKET SECTION

## HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

| State— | Indicated Demand First Quarter 1931 | Economic Limit First Quarter 1931 | Daily Average Last Week | Daily Excess Last Week | Daily Average Since January 1 | Daily Excess Since January 1 |
|---|---|---|---|---|---|---|
| Arkansas | 54,000 | 52,000 | 46,700 | —5,300 | 49,460 | —2,504 |
| California | 547,000 | 500,000* | 530,400 | 30,400 | 530,653 | 30,653 |
| Kansas | 109,000 | 105,000 | 109,300 | 4,300 | 110,372 | 5,372 |
| Louisiana | 73,000 | 71,000 | 65,800 | —5,200 | 68,993 | —2,007 |
| Oklahoma | 510,000 | 465,000* | 552,800 | 87,800 | 485,103 | 20,103 |
| Texas | 739,000 | 644,000* | 765,200 | 121,200 | 694,228 | 50,228 |
| Balance of U. S. | 236,000 | 225,000 | 205,150 | —19,850 | 206,954 | —18,046 |
| Total | 2,268,000 | 2,062,000 | 2,275,350 | 213,350 | 2,145,763 | 83,763 |

* Allowable.

530,000 barrels and a good chance of reducing this to less than 500,000 barrels, the long view outlook is not as dark as the short-term horizon. Too much oil is being held in storage, but nobody knows how to reduce it at a faster rate—except through a lower daily production of crude oil.

Crude prices seem too low, but they may do as much good as harm. They will at least discourage development of a larger potential than now exists. If crude prices had been reduced when overproduction first appeared on the scene, the industry might have been saved its present panicky state. Price reductions should have been local, however, with the flush fields suffering as production increased.

Formation of a huge marketing organization to handle nearly one-half of present production in California is being carried out by leading independents. A working agreement with the majors probably will be reached and production reduced to 500,000 barrels or less.

Several bills which will affect the oil industry are being considered by the state legislature. One bill would virtually

## Cracked Gasoline Production

Week ending March 21, 1931

(Barrels of 42 gallons)

| District | Potential Charging Capacity Total | Reporting | Per Cent | Production Total | Daily Average |
|---|---|---|---|---|---|
| East Coast | 246,900 | 222,900 | 90.3 | 556,000 | 79,400 |
| Appalachian | 45,900 | 43,400 | 94.6 | 135,000 | 19,300 |
| Ind., Ill., Ky. | 294,200 | 280,200 | 95.2 | 446,000 | 63,700 |
| Okla., Kans., Mo. | 219,900 | 197,900 | 90.0 | 379,000 | 54,100 |
| Texas | 395,500 | 379,400 | 95.9 | 817,000 | 116,700 |
| Louisiana-Arkansas | 109,400 | 106,900 | 97.7 | 205,000 | 29,300 |
| Rocky Mountain | 95,100 | 95,100 | 100.0 | 86,000 | 12,300 |
| California | 182,700 | 182,700 | 100.0 | 280,000 | 40,000 |
| Total week Mar. 21 | 1,589,600 | 1,508,500 | 94.9 | 2,904,000 | 414,800 |
| Total week Mar. 14 | 1,589,600 | 1,497,500 | 94.2 | 2,853,000 | 407,600 |
| T'tl Mar. 22, '30 | | Not Available | | | |
| **The Texas and Louisiana Gulf Coast Figures Shown Below are included in the totals of their respective districts.** | | | | | |
| Texas Gulf Coast | 305,000 | 300,500 | 98.5 | 675,000 | 96,400 |
| Louisiana Gulf Coast | 77,000 | 77,000 | 100.0 | 151,000 | 21,600 |

## Imports of Petroleum

(Barrels of 42 gallons)

| | Week Ending March 21 | Week Ending March 14 |
|---|---|---|
| AT ATLANTIC COAST PORTS— | | |
| Baltimore | 185,000 | 239,000 |
| Boston | 119,000 | 66,000 |
| New York | 1,071,000 | 982,000 |
| Philadelphia | 240,000 | 225,000 |
| Others | 285,000 | 67,000 |
| Total | 1,900,000 | 1,579,000 |
| Daily Average | 271,429 | 225,571 |
| AT GULF COAST PORTS— | | |
| Galveston District | ..... | ..... |
| New Orleans & Baton Rouge | ..... | ..... |
| Port Arthur & Sabine District | ..... | ..... |
| Tampa | 46,000 | 15,000 |
| Total | 46,000 | 15,000 |
| Daily Average | 6,571 | 2,143 |
| AT ALL UNITED STATES PORTS— | | |
| Total | 1,946,000 | 1,594,000 |
| Daily Average | 278,000 | 227,714 |
| Daily Average Four Weeks Ending | 257,964 | 238,643 |
| **Distribution of Total Imports is as Follows:** | | |
| Crude | 1,026,000 | 897,000 |
| Gasoline | 243,000 | 319,000 |
| Gas Oil | ..... | 55,000 |
| Fuel Oil | 677,000 | 323,000 |
| Total | 1,946,000 | 1,594,000 |

## California Oil Receipts

(Barrels of 42 gallons)

| | Week Ending March 21 | Week Ending March 14 |
|---|---|---|
| ATLANTIC COAST PORTS— | | |
| Baltimore | ..... | 156,000 |
| Boston | ..... | 50,000 |
| New York | 220,000 | 72,000 |
| Philadelphia | ..... | 110,000 |
| Others | ..... | ..... |
| Total | 220,000 | 388,000 |
| Daily Average | 31,429 | 55,428 |
| AT GULF COAST PORTS—— | | |
| Total | ..... | 120,000 |
| Daily Average | ..... | 17,143 |
| AT ATLANTIC AND GULF COAST PORTS— | | |
| Total | 220,000 | 508,000 |
| Daily Average | 31,429 | 72,571 |
| Daily Average Four Weeks Ending | 49,750 | 57,750 |
| **Distribution of Total California Oil Receipts is as Follows:** | | |
| Gasoline | 220,000 | 388,000 |
| Gas Oil | ..... | 120,000 |
| Total | 220,000 | 508,000 |

# MARKET SECTION

## United States Daily Average Production

| 1930 | Oklahoma | Kansas | Texas (Outside Gulf Coast) | Gulf Coast | North Louisiana | Arkansas | Eastern States | Rocky Mountain | California | United States Daily Av. | United States Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| March | 622,650 | 115,500 | 644,400 | 206,000 | 41,600 | 58,600 | 132,700 | 73,600 | 649,000 | 2,544,050 | 78,865,400 |
| April | 657,050 | 122,200 | 640,950 | 206,800 | 42,100 | 57,800 | 138,700 | 75,950 | 625,700 | 2,576,250 | 77,018,100 |
| May | 663,300 | 131,000 | 662,350 | 203,900 | 39,900 | 53,800 | 137,150 | 82,500 | 623,700 | 2,597,700 | 80,529,600 |
| June | 665,550 | 133,600 | 668,300 | 210,500 | 40,300 | 56,900 | 135,750 | 84,600 | 598,000 | 2,593,500 | 77,806,900 |
| July | 594,750 | 121,600 | 652,350 | 209,400 | 40,550 | 55,400 | 137,200 | 98,350 | 610,450 | 2,520,050 | 78,121,200 |
| August | 558,850 | 115,650 | 646,400 | 206,600 | 41,500 | 55,100 | 128,550 | 106,000 | 611,250 | 2,470,900 | 76,597,600 |
| September | 558,900 | 116,550 | 606,550 | 200,750 | 40,150 | 53,550 | 121,400 | 110,650 | 604,900 | 2,413,400 | 72,402,205 |
| October | 542,100 | 114,850 | 609,500 | 194,850 | 41,500 | 52,800 | 121,750 | 104,000 | 590,800 | 2,372,150 | 73,536,350 |
| November | 491,550 | 111,400 | 579,350 | 190,100 | 44,050 | 52,000 | 116,400 | 101,950 | 601,200 | 2,288,000 | 68,639,150 |
| December | 459,300 | 105,550 | 533,400 | 189,300 | 43,000 | 51,100 | 112,200 | 100,500 | 587,450 | 2,181,800 | 67,636,500 |
| 1931 | | | | | | | | | | | |
| January | 452,000 | 106,350 | 511,050 | 188,850 | 41,100 | 50,700 | 110,300 | 96,700 | 535,700 | 2,092,750 | 64,874,450 |
| February | 473,750 | 114,450 | 523,700 | 185,600 | 43,950 | 49,950 | 109,800 | 100,100 | 527,300 | 2,600,600 | 59,600,450 |
| March 7 | 501,650 | 112,450 | 546,250 | 180,600 | 41,250 | 47,950 | 109,000 | 94,050 | 523,500 | 2,156,700 | 14,096,900 |
| March 14 | 509,800 | 111,400 | 573,700 | 178,450 | 40,500 | 48,400 | 106,150 | 94,250 | 527,900 | 2,190,550 | 15,333,850 |
| March 21 | 572,100 | 109,800 | 585,500 | 174,250 | 39,950 | 47,300 | 109,550 | 97,700 | 531,900 | 2,268,050 | 15,876,350 |
| March 28 | 552,800 | 109,300 | 613,950 | 177,350 | 39,700 | 46,700 | 110,250 | 94,900 | 530,400 | 2,275,350 | 15,927,450 |
| Increase | ..... | ..... | 28,450 | 3,100 | ..... | ..... | 700 | ..... | ..... | 7,300 | 51,100 |
| Decrease | 19,300 | 500 | ..... | ..... | 250 | 600 | ..... | 2,800 | 1,500 | ..... | ..... |

## Last Week's Daily Average Production by Districts

| TEXAS | March 28 | March 21 |
|---|---|---|
| Panhandle District | 55,550 | 53,700 |
| North Texas | 57,800 | 58,300 |
| West Central Texas | 25,350 | 25,300 |
| East Central Texas | 169,000 | 138,900 |
| West Texas | 243,500 | 234,650 |
| Southwest Texas | 62,750 | 74,650 |
| Texas Gulf Coast | 151,250 | 147,500 |
| Total Texas | 765,200 | 733,000 |
| OKLAHOMA | 552,800 | 572,100 |
| CALIFORNIA | 530,400 | 531,900 |
| KANSAS | 109,300 | 109,800 |

| LOUISIANA | March 28 | March 21 |
|---|---|---|
| North Louisiana | 39,700 | 39,950 |
| Louisiana Gulf Coast | 26,100 | 26,750 |
| Total Louisiana | 65,800 | 66,700 |
| ARKANSAS | 46,700 | 47,300 |
| MOUNTAIN STATES | | |
| Wyoming | 40,800 | 43,950 |
| Montana | 8,900 | 8,650 |
| Colorado | 4,200 | 4,250 |
| New Mexico | 41,000 | 40,850 |
| Total Mountain States | 94,900 | 97,700 |
| EASTERN STATES | 110,250 | 109,550 |
| Total United States | 2,275,350 | 2,268,050 |

## Summarized Review of Field Results

| State— | Completions This week | Completions Last week | Oil Wells This week | Oil Wells Last week | Gas Wells This week | Gas Wells Last week | Failures This week | Failures Last week | Initial Prod. This week | Initial Prod. Last week |
|---|---|---|---|---|---|---|---|---|---|---|
| Arkansas | 6 | .. | 1 | .. | 1 | .. | 4 | .. | 143 | ... |
| California | 10 | 5 | 7 | 5 | .. | .. | 3 | .. | 1,495 | 2,310 |
| Illinois | 3 | .. | 1 | .. | .. | .. | 2 | .. | 3 | ... |
| Indiana | .. | 9 | .. | 4 | .. | 2 | .. | 3 | ... | 58 |
| Kansas | 7 | 7 | 3 | 2 | 3 | 1 | 1 | 4 | 1,595 | 440 |
| Kentucky | 23 | 1 | 3 | .. | 9 | .. | 11 | 1 | 190 | ... |
| Louisiana | 10 | 9 | 3 | 3 | 1 | 1 | 6 | 5 | 3,000 | 960 |
| Michigan | .. | 2 | .. | 1 | .. | 1 | .. | .. | ... | 130 |
| Mississippi | 5 | 2 | .. | .. | 1 | 1 | 4 | 1 | ... | ... |
| Ohio | 15 | 18 | 3 | 4 | 6 | 10 | 6 | 4 | 179 | 67 |
| Oklahoma | 19 | 30 | 11 | 11 | 2 | 4 | 6 | 15 | 44,245 | 15,003 |
| Pennsylvania | 17 | 22 | 8 | 14 | 5 | 5 | 4 | 3 | 31 | 56 |
| Texas | 91 | 103 | 50 | 56 | 2 | 3 | 39 | 44 | 240,370 | 139,612 |
| West Virginia | 13 | 11 | .. | 3 | 7 | 7 | 6 | 1 | ... | 11 |
| Missouri | 1 | .. | .. | .. | .. | .. | 1 | .. | ... | ... |
| New York | 2 | 3 | 2 | 2 | .. | .. | .. | 1 | 7 | 8 |
| Total | 222 | 222 | 92 | 105 | 37 | 35 | 93 | 82 | 291,258 | 158,655 |
| Increase This Week | .. | .. | .. | .. | 2 | .. | 11 | .. | 132,603 | ... |
| Decrease This Week | .. | .. | 13 | .. | .. | .. | .. | .. | ... | ... |

## Comparison of Permits Granted for New Wells

| State— | Week Ending March 28 | Previous week | This week 1930 | Total this Month | This month 1930 | Total this year | Total this date last year | 1930 year total |
|---|---|---|---|---|---|---|---|---|
| Arkansas | .. | .. | 2 | 4 | 9 | 16 | 29 | 108 |
| California | 10 | 10 | 11 | 32 | 63 | 99 | 184 | 922 |
| Louisiana | 7 | 7 | 19 | 27 | 165 | 96 | 263 | 948 |
| Kansas | 5 | 3 | 19 | 16 | 95 | 128 | 228 | 944 |
| Oklahoma | 32 | 18 | 71 | 78 | 304 | 301 | 683 | 2,830 |
| Texas | 122 | 91 | 214 | 314 | 869 | 1,160 | 1,960 | 7,052 |
| Total | 176 | 129 | 336 | 471 | 1,505 | 1,800 | 3,447 | 12,804 |

# MARKET SECTION

make the oil business a public utility. It is being supported by several large companies and opposed by the smaller operators.

There has been no change in gasoline prices. Some of the refiners are getting only 3½ cents per gallon, gross for gasoline, delivered. With a service station price of 10½ cents, a three-cent state tax and a four-cent differential between the station and tank wagon price, it is easy to arrive at a gross of 3½ cents to the refiner.

## Oklahoma Production Moves Lower to 551,975 Barrels

Production in Oklahoma moved downward last week due to the decrease at Oklahoma City, whose average output was 120,755 barrels, a reduction of 29,000 barrels daily. For the state the average output was 551,975 barrels, a reduction of 19,000 barrels daily.

In the Greater Seminole area the difference between the Oklahoma City drop and that for the whole state was reflected. Potentials still were being taken in the Seminole pools, which put their output out of line temporarily.

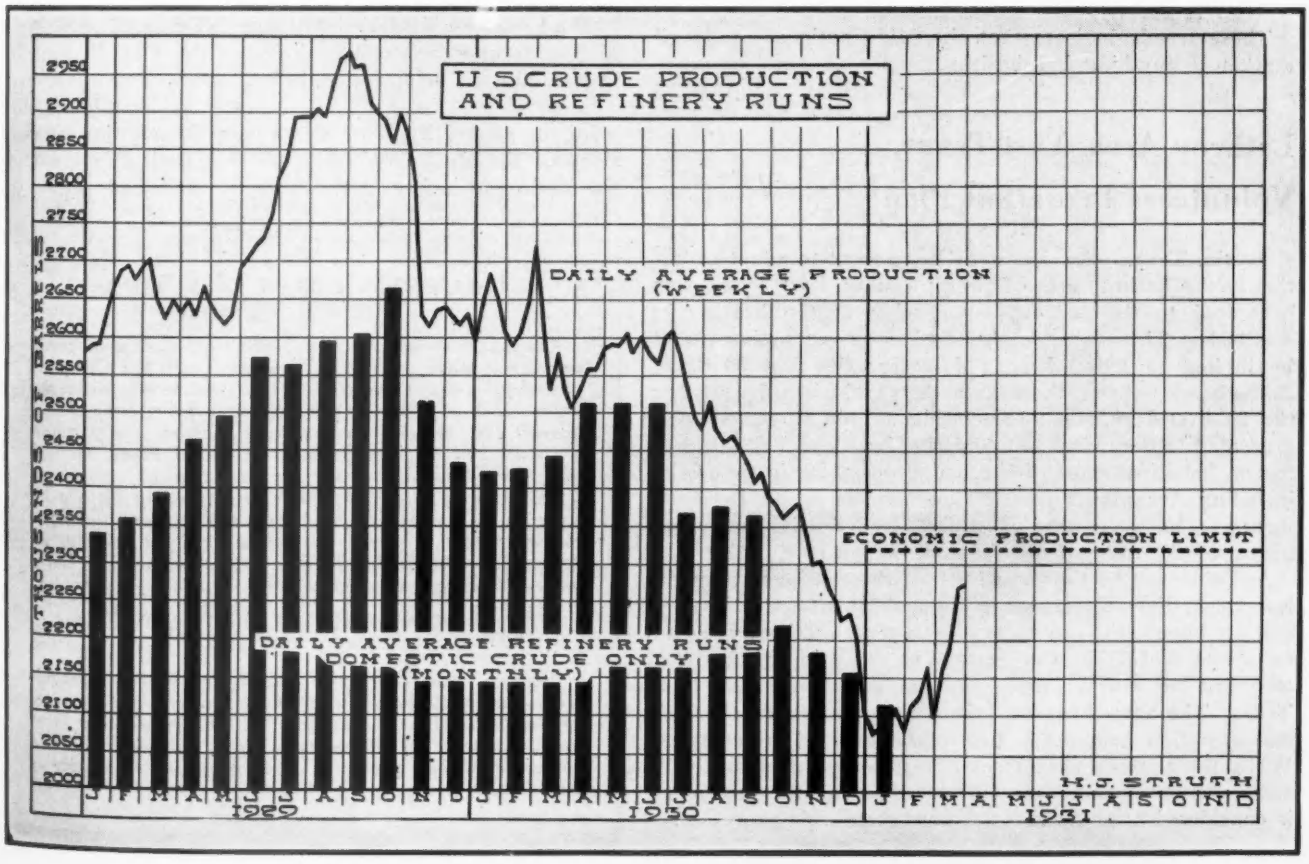
Beginning April 1 the task of taking potentials at Oklahoma City was started and this is expected to throw that field out of line for whatever period is necessary to determine output.

Both the output of Oklahoma City and the authority of officials to change proration orders without a hearing will be tested in the Federal District Court at Oklahoma City by Sinclair Oil & Gas Company, which filed a petition seeking an injunction against the Oklahoma Corporation Commission. The petition is not one of attack on the constitutionality of the statute under which proration orders are written but: "to compel the commission to exercise its powers to fix the allowable production in accordance with the market demand, as required by law."

The petition sets out that in February the market demand for oil from the Oklahoma City pool was in excess of 150,000 barrels daily, although producers there were not allowed to take as much as 125,000 barrels per day.

The sudden change in the orders of the corporation commission, following the hearing, which started March 4, also are cited in the petition. This hearing resulted in an order, issued March 10, to the effect that the market demand for Oklahoma City oil had been found to be 150,000 barrels per day. This increased allowable was issued but a short time before a reduction in the price schedule for crude oil in Oklahoma. Governor William H. Murray then held a conference with members of the corporation commission, who rescinded the 150,000-barrel order and put the allowable of the Oklahoma City pool back to 125,000 barrels daily.

Governor Murray sent a message to E. G. Seubert, president of Standard Oil Company (Indiana) asking that the higher price be restored on condition that the lower Oklahoma City output be left. The price was not restored. This change from 150,000 barrels back to 125,000 barrels



# MARKET SECTION

per day was made without a hearing as to the market demand.

Output of Kansas fields averaged 108,990 barrels for the week ending March 28, very little different from the preceding week. The situation in Kansas has been without incident, except through moves made by purchasing companies to take their shares of the oil from the wells of the stripper section of the state. The Standard Oil Company (Indiana) gave out the following statement:

"To complete its agreement to provide temporary relief for the Kansas stripper wells for a 60-day period, Standard Oil Company (Indiana) today delivered an order for stripper oil at the rate of 6000 barrels per day up to April 14.

"The Indiana company also gave an order for 2000 barrels a day of the stripper oil to be taken on a permanent basis, beginning April 15. This is in conformity with its agreement made at the conference of oil company representatives with Governor Woodring of Kansas to work out the permanent settlement of the stripper relief problem. At that conference Governor Woodring secured pledges from other companies to take an aggregate of 2300 barrels. The governor is endeavoring to persuade still other companies to buy the remaining amount."

Although the price structure for the Mid-Continent has not changed since early March, it is weaker by reason of revisions in California and the development in East Texas.

Gasoline of the U. S. motor grade, another key to the status of the crude oil market, also is not promising. Contracts at 3½ cents have been made over April and reports have come through to the effect that some gasoline will sell even lower than this over the month. Natural gasoline also is between two and 2½ cents, with indications that it will go to the two-cent level.

These trends indicate that the Mid-Continent crude oil market is anything but healthy.

## Lathrop Area, East Texas, Volunteers Proration Plan

Austin, Texas.—An operators' agreement to adopt proration in the Lathrop area of Gregg County, East Texas, was presented to the railroad commission at the hearing in Austin last Thursday, March 26, whereby production would be limited to 15,000 barrels daily for the first 30 days; 20,000 barrels during the next 30 days and 25,000 barrels for the final 30 days of a 90-day period. This agreement was presented to the railroad commission by Lloyd Price, speaking on behalf of most of the major operators in that field, including Arkansas Fuel Oil Company, of which he is attorney. The agreement is to become effective upon approval of the railroad commission.

As evidenced by the conclusion of the hearings at Austin last week, East Texas operators and land owners in general are opposed to any form of proration and have gone on record to state that the agreement made in the Lathrop area has no bearing upon the proration status of East Texas. The agreement was given the approval of the central proration committee, before the railroad commission. While the Lathrop agreement covers only a comparatively small section of East Texas oil development, the agreement is considered a forward step toward state-wide proration.

## Magnolia Pays Mid-Continent Prices for East Texas Oil

Dallas, Texas.—Payment of Mid-Continent gravity scale prices by Magnolia Petroleum Company for crude in Rusk and Gregg Counties, effective March 26, creates a wide differential in prices now prevailing in the East Texas district. Although the above company is not to become a general crude purchaser in the district for the time being, the top price will be paid for all the royalty oil produced from its various properties in the Kilgore and Longview fields. Adoption of the Mid-Continent price schedule by Magnolia Petroleum Company has not been followed by other major producers in the district, and the latter are paying an average of 45 cents per barrel, while some independents are paying only 35 cents.

Classification of East Texas crude with Mid-Continent was made by the Magnolia Petroleum Company rather than to discriminate between the two districts. Oil from the former district compares with the best grades obtainable in the Mid-Continent, and enjoys a transportation advantage because of its closeness to the Gulf Coast refining centers. Magnolia Pipe Line Company began making direct trunk line shipments from East Texas to Beaumont on the morning of March 26.

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Dallas, Texas.—Construction of a second tank car rack in the East Texas district by Shell Petroleum Corporation, which maintains district offices here, was authorized late last week. This concern is finishing work on a 30-car rack, located on the Texas Pacific Railroad, west of Camps, with a combination four- and six-inch line extending to the heart of the Longview field, and will begin shipments about April 1. The second rack will be built on the I.&G.N. Railroad in the Kilgore field, and will have a capacity of 50 cars. The latter will be connected to the various leases now being developed by Shell Petroleum Corporation on both sides of the Rusk-Gregg County line with a combination six- and eight-inch system.

### CALIFORNIA HEAVY OILS BRING HIGHEST PRICES

***Los Angeles.—A complete revision of California crude prices was made on March 30 when Union Oil Company posted price ranges in leading fields on an inverted scale; differentials applying in reverse order from high to low gravity oil. Other purchasers are meeting the postings.***

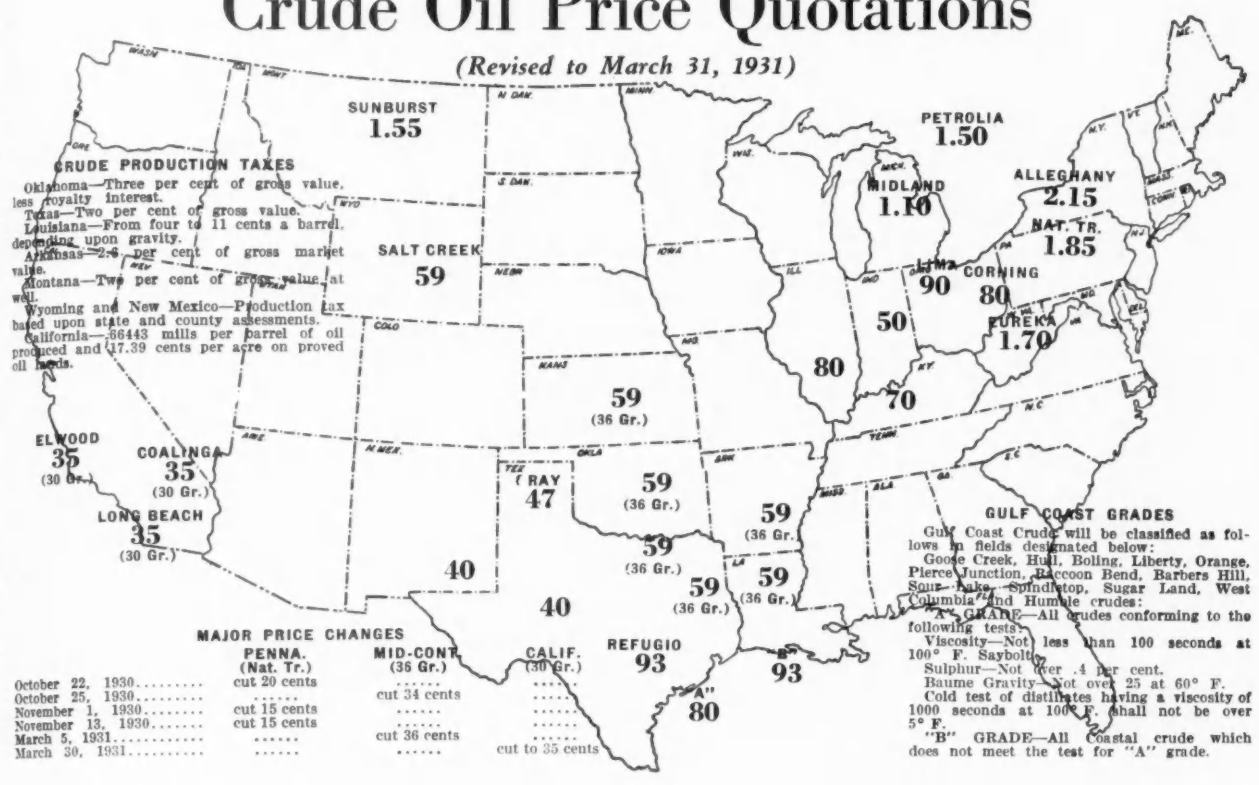
***In all Los Angeles Basin fields except Playa del Rey oil from 14 to 20.9 gravity is posted at 65 cents, with a deduction of three cents for each degree up the gravity scale to 30.9 which is priced at only 35 cents a barrel. All oil above 30 gravity is posted at a flat price of 35 cents. In most fields the new price scale makes heavy oil worth almost double the price in effect for light oil.***

### MAGNOLIA POSTS GRAVITY SCALE IN EAST TEXAS

***Dallas, Texas.—Effective March 26, Magnolia Petroleum Company posted the Mid-Continent gravity scale of prices for East Texas oil. 36 gravity oil now commands a price of 59 cents a barrel compared with a former unofficial flat price of 40 cents for all grades of East Texas crude.***

# Crude Oil Price Quotations

*(Revised to March 31, 1931)*




**CRUDE PRODUCTION TAXES**

Oklahoma—Three per cent of gross value, less royalty interest.
Texas—Two per cent of gross value.
Louisiana—From four to 11 cents a barrel, depending upon gravity.
Arkansas—2.6 per cent of gross market value.
Montana—Two per cent of gross value at well.
Wyoming and New Mexico—Production tax based upon state and county assessments.
California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

**MAJOR PRICE CHANGES**

| | PENNA. (Nat. Tr.) | MID-CONT. (36 Gr.) | CALIF. (30 Gr.) |
|---|---|---|---|
| October 22, 1930 | cut 20 cents | ..... | ..... |
| October 25, 1930 | ..... | cut 34 cents | ..... |
| November 1, 1930 | cut 15 cents | ..... | ..... |
| November 13, 1930 | cut 15 cents | ..... | ..... |
| March 5, 1931 | ..... | cut 36 cents | ..... |
| March 30, 1931 | ..... | ..... | cut to 35 cents |

**GULF COAST GRADES**

Gulf Coast Crude will be classified as follows in fields designated below:
Goose Creek, Hull, Boling, Liberty, Orange, Pierce Junction, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugar Land, West Columbia and Humble crudes:
"A" GRADE—All crudes conforming to the following tests:
Viscosity—Not less than 100 seconds at 100° F. Saybolt.
Sulphur—Not over .4 per cent.
Baume Gravity—Not over 25 at 60° F.
Cold test of distillates having a viscosity of 1000 seconds at 100° F. shall not be over 5° F.
"B" GRADE—All Coastal crude which does not meet the test for "A" grade.

## Official Postings and Differentials

**California:** (Prices effective March 30).

In all **Los Angeles Basin** fields (except Playa del Rey) oil from 14 gravity to 20.9 gravity is 65 cents. Deduct 3 cents for each degree up the scale to 30.9, making this the lowest at 35 cents. Fields in this group include **Alamitos Heights, Long Beach, Seal Beach, Torrance, Athens, Rosecrans, Dominguez, Santa Fe Springs, Montebello, Huntington Beach, East Coyote, Richfield** and **Brea-Olinda.**

In the **San Joaquin Valley** fields, 11 to 11.9 gravity crude is 50 cents per barrel, 14 to 14.9 gravity, 55 cents. Differential of 2 cents off each degree up the scale makes 30 gravity and above 35 cents per barrel. Fields in this group include **Coalinga, McKittrick, Kern River, Sunset-Midway, Elk Hills, Buena Vista Hills** and **Lost Hills.**

**Santa Paula** 14 to 19.9 gravity, 60 cents; 20 gravity, 58 cents; 21 gravity, 56 cents, and take off 3 cents for each degree up to and including 28 gravity. **Orcutt** 14 to 19.9 gravity, 55 cents, and take off 2 cents for each degree up to and including 29 gravity which is 35 cents.

**Oklahoma-Kansas-North Texas:** (Effective March 5, 1931). Below 29 gravity 43 cents with differential of 2 cents to 40 and above. Magnolia Petroleum Company posts 40 cents for below 26 gravity with differential of 1 cent to 29 gravity, 43 cents. From 29 to 40 and above, same schedule as foregoing. North Texas posting applies to oil produced in **Wichita, Wilbarger, Archer, Northern Young** and **Van Zandt** Counties. Also includes **Ranger, Mexia, Powell, Boggy Creek, Richland, Wortham, Currie, Moran** and **Nocona** crudes.

**Texas Panhandle:** (Effective March 10, 1931).
**Gray County:** Below 35 gravity 43 cents with differential of 2 cents to 40 and above. **Carson-Hutchinson Counties.:** Below 35 gravity 38 cents with differential of 2 cents to 40 and above.

**East Texas:** (Effective March 26). Same scale of prices as Oklahoma-Kansas-North Texas.

**West Texas and New Mexico:** Flat price of 40 cents a barrel for **Winkler, Pecos** and **Lea, (N. M.).** Flat price of 35 cents a barrel for **Crane, Upton, Howard, Ector, Ward, Loving, Crockett, Mitchell** and **Glasscock** Counties.

**Southwest Texas.**

**Refugio:** Heavy oil, below 25 gravity, 69 cents; **Light crude,** 25-25.9 gravity, 71 cents with differential of 2 cents to 40 and above. **Mirando,** 69 cents; **Salt Flat** and **Darst Creek,** 60 cents; **Pettus,** 95 cents; **Luling** and **Corsicana heavy,** 45 cents.

**Gulf Coast.**

**Grade "A":** 80 cents a barrel; **Grade "B"**—below 25, 69 cents with differential of 2 cents to 40 and above. **High Island,** 75 cents; **Jennings,** 80 cents; **Markham,** 50 cents.

**North Louisiana and Arkansas.**

**Pine Island, Haynesville, Bull Bayou, El Dorado, Cotton Valley, Zwolle:** Below 29, 43 cents with differential of 2 cents to 40 and above. Magnolia Petroleum Company posts 40 cents for below 26 gravity with 1 cent differential to 29 gravity, 43 cents. From 29 to 40 and above, same schedule as foregoing. **Stephens:** Below 29, 54 cents with differential of 4 cents to 32 and above. **Smackover,** 45 cents; **El Dorado east field** 70 cents; **Bellevue,** 45 cents.

**Rocky Mountain Fields:** (Effective March 5, 1931).

**Salt Creek:** 29-29.9 gravity 45 cents with differential of 2 cents to 37 and above. **Elk Basin** and **Grass Creek,** 90 cents; **Big Muddy,** 65 cents; **Lance Creek,** 98 cents; **Rock Creek** 66 cents; **Mule Creek,** $1.20; **Rex Lake,** $1.10; **Osage,** 50 cents; **Cat Creek,** $1.25; **Pondera,** $1.45; **Sunburst,** $1.55; **Hogback, N. M.,** $1.40.

**Eastern States:** (Effective November 13, 1930).

**Bradford, Allegany** district, $2.15; **National Transit** oil, $1.85; **Southwest Pennsylvania** oil, $1.80; **Eureka P. L. (W. Va.),** $1.70; **Buckeye P. L. oil,** $1.45; **Corning** crude, $1.15; **Somerset** in Eureka Lines, 75 cents; **Ragland,** 60 cents; **Oil City, Ky.,** 70 cents.

**Michigan—Midland,** $1.10; **Muskegon,** below 29 gravity, 65 cents with differential of 4 cents to 35 gravity; 31-31.9, 92 cents with 3 cent differential to 44 gravity and above.

**Central States:** (Effective March 5, 1931).

**Wooster,** 99 cents; **Lima,** 90 cents; **Waterloo,** $1.20; **Indiana,** 50 cents; **Princeton,** 80 cents; **Illinois,** 80 cents; **Western Kentucky,** 75 cents.

**Canada:** (Effective October 28, 1930).

**Petrolia,** $1.50; **Oil Springs,** $1.57.

# FLEXIBLE THINGS ENDURE

THE *SUPPLE BROOM*
SWEEPS CLEAN AND
LASTS LONGEST

*Fully Patented*

## FLEXIBLE CUPS ON THE GUIBERSON SWAB LIFT ALL THE FLUID AND WEAR LONGER

In the best brooms the long, pliant straws conform to irregular floor surfaces and carry all the dirt before them, also evade excessive wear through the suppleness of the straw tips. This type of broom "sweeps clean" and outlasts the stubby, stiff-strawed variety.

The flexible cups on the Guiberson Swab carry their load of oil unhindered past irregular casing surfaces—and escape damage from wrinkles, dents and protrusions. Guide wires steer the cup rims over the dangerous areas. The weight of the column of fluid maintains a perfect seal between the cup rims and the casing walls—the heavier the column, the tighter the seal. Pressure from below collapses the cups, allowing far speedier passage into the hole. The Guiberson Swab is doing most of the world's swabbing today.

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GUIBERSON
BETTER BE SAFE THAN SORRY

# Personal Mention—Men You Know

▼ ▼ ▼

## New Gulf Oil Head

James Frank Drake, recently elected to the presidency of Gulf Oil Corporation, has been connected with the Mellon interests since June, 1919, when he left the United States army claims board as Lieutenant Colonel to become assistant to W. L. Mellon, who was then president of Gulf Oil Company, and before the present holding company was formed.

JAMES FRANK DRAKE

During the administrations of Harding and Coolidge Colonel Drake served Secretary of the Treasury Mellon in a confidential capacity, leaving this work to become vice-president of Standard Steel Car Company in January, 1923. The following year he was chosen president of that organization. Later when that company was merged with the Pullman Companies, he was elected chairman of Pullman, Inc., the resultant company. He is also president of Standard Car Securities Company and Standard Car Finance Corporation, and is a vice president and director of Pittsburgh Equitable Meter Company and a director of American Rolling Mill Company.

Through his work in the army Colonel Drake came to the attention of the Mellon interests while attached to the ordinance department in Pittsburgh. He was born at Pittsfield, New Hampshire, Sepember 1, 1880, attending the schools there and later entered Dartmouth College where he took an A.B. degree in 1902; later he received a Master degree from Amos Tuck School of Administration and Finance.

**Chester W. Brown,** for several years director of production and exploration for Union Oil Company of California, has resigned and will retire from active work. He has been connected with the company for nearly 40 years, having started as a tool dresser.

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**C. P. Dunbar,** formerly connected with the United States government in Haiti in soil survey and paleontological work has been named paleontologist for the minerals division of the Louisiana Conservation Commission with headquarters in Shreveport. Addition of a paleontologist is an innovation with the Louisiana minerals division, the addition being made for the purpose of aiding operators not maintaining a staff of experts. In future deep tests in Louisiana the division will require cores for examination with a view to identifying formations and correlating the data with tests in adjacent states.

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**Guy Higby,** Lander, Wyoming, engineer, has been retained by North Central Gas Company to supplement its staff now stationed at Scottsbluff, Nebraska, where headquarters is established for a surveying crew on the company's projected gas pipe line from central Wyoming to western Nebraska.

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**Fred E. Cooper,** Tulsa, oil field winch developer, has recently completed a tour of the North and West Texas fields including parts of Southwest Texas. He accompanied A. G. Bailey and John Province, his sales representatives in that territory.

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**Ralph W. Loucks,** superintendent in the Rocky Mountain states, for Carter Oil Company, was instantly killed March 21 in the Billy Creek gas field, north of Casper, Wyoming, while superintending the job of blowing out a gasser in the field. While the well cleaned itself a small piece of rock was deflected and struck Mr. Loucks on the head, killing him instantly. He is survived by his widow and one son, his parents and two sisters. Funeral services were conducted in Casper and the body shipped to Denver for cremation.

**T. F. Lydon,** vice-president, Shell Petroleum Corporation, St. Louis, visited the district offices maintained by the company at Dallas last week. A drilling campaign of major proportions is confronted by Shell Petroleum Corporation in East Texas in taking care of offsets now completed and getting under way.

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**Harry F. Sinclair,** chairman of the board, Sinclair Consolidated Oil Corporation, has returned to New York, following an extended visit in California.

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**R. N. Ferguson,** well known geologist, has been appointed general manager of Bolsa Chica Oil Corporation.

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**Atlee Pomerene,** government attorney in various suits to recover leases, is now in California. He will lead the government's fight to cancel certain Kern County leases which were granted during the Harding administration.

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**H. Iwasaki,** an executive of the Mitsubishi interests of Japan, has been studying American petroleum production and marketitng methods while visiting in California. He recently returned to Japan from San Francisco.

GARY COOPER, *picture star, who was an interested spectator at the Second Annual Oil Equipment and Engineering Exposition in Los Angeles*

## Officers Society of Petroleum Geophysicists

DR. DONALD C. BARTON, *consulting geologist and geophysicist, Houston, president*
*—Photo by Bachrach*

JOHN F. WEINZIERL, *consulting geologist and geophysicist, Houston, secretary-treasurer*

G. H. WESTBY, *Empire Oil & Refining Company, Bartlesville, Oklahoma, vice-president*

PAUL WEAVER, *Gulf Production Company, Houston, editor*

DR. E. E. ROSAIRE, *Geophysical Research Corporation, Houston, former vice-president*

# Petroleum Geophysicists Now Have National Organization

By JOHN F. WEINZIERL

GEOPHYSICAL methods in their practical application first came into the limelight in America in the years 1923 and 1924. The two most successful methods, namely, the seismic and gravimetric, reaped their first and for the time being greatest success on the Gulf Coast of Texas and Louisiana. Houston became the center of an unprecedented activity in the search of salt domes and kindred structures. For this reason Houston is always the Mecca toward which men with new geophysical methods direct their steps in the hope of establishing recognition and from thence to set forth for material gains. It is also the city which is visited by foreign geophysicists in hopes of enhancing their knowledge of field technique.

As far as the geophysicists engaged in search for structures for oil companies are concerned Houston is in some manner a headquarter and they either consult their own company's research departments or visit others of recognized authority in the city.

Houston, as a center with the many research departments of oil companies, the large group of consulting geophysical companies and consulting geophysicists within its bounds along with the glamour surrounding it brought about by the success of geophysical methods on the coast, was quite the logical place for the founding of a society or an association among the geophysicists of mutual interests.

At a banquet held at the Lamar Hotel, May 20, 1930, the Society of Petroleum Geophysicists came into being. This society has since functioned as a medium of exchange for ideas between geophysicists. It has grown slowly in numbers due to its restricted membership which is well distributed over the globe. The object of this society in the years to come is to build up a reference library accessible to members and to serve as a forum where the more intricate developments in instruments and the advancements in interpretive methods will meet with sympathetic criticism.

As in the past, the society will continue to hold meetings at desired intervals as well as joint meetings with other groups and societies or associations when such is of mutual interest. Along these lines the Society of Petroleum Geophysicists met in San Antonio at the time of the annual meeting of the American Association of Petroleum Geologists. An important business meeting was held and many new developments in geophysics were discussed.

In 1930 the society published its first collection of papers which had been presented before it in various meetings. These papers are bound under a cover having the following title, "The Society of Petroleum Geophysicists Publication of Papers Presented in 1930." Up to the present time the executive committee has seen fit to only distribute this publication among the members.

The present executive committee, elected at the San Antonio meeting, consists of Dr. Donald C. Barton, consulting geologist and geophysicist, Houston, president; G. H. Westby, Empire Oil & Refining Company, Bartlesville, Oklahoma, vice-president; John F. Weinzierl, consulting geologist and geophysicist, Houston, secretary-treasurer; and Paul Weaver, Gulf Production Company, Houston, editor of the organization's publications.

The original committee, chosen when the association was organized, included Dr. Donald Barton, president, Dr. E. E. Rosaire, Geophysical Research Corporation, Houston, vice-president, and John F. Weinzierl, secretary-treasurer.

## All Companies Agree on Restriction of Imports

Washington, D. C.—Announcement by Standard Oil Company (Indiana) that it would join with other leading companies in curtailing imports of foreign oil was received here this week with a great deal of satisfaction by members of the administration who have been seeking to bring about an agreement whereby some form of proration such as is used in domestic fields might be secured with respect to foreign supplies.

The full co-operation now afforded by the industry, Standard Oil Company of New Jersey, Dutch Shell and Gulf Refining Company having previously announced curtailment, was hailed by Secretary of the Interior Wilbur as presaging a successful outcome to the conference which will be held by the Federal Oil Conservation Board April 9, when leaders of the oil industry will bring up for round-table discussion the many problems of the present situation.

Extension of proration to the new East Texas pool, it was indicated here, is still an important factor in any effort which might be made to secure import restriction over an extended period, but the belief is expressed that this will be taken care of by Texas authorities and that, at the expiration of the 90 days for which the companies are curtailing imports, continuation of the plan will be secured without difficulty.

### Board Has No Plans

The oil conservation board, it was further indicated, will have no plans of its own to offer, although it is expected to have prepared new reports on the oil situation, but will enter the conference with a view to aiding the industry itself to determine and adopt a program which will alleviate existing conditions. Such a program will be sought at a meeting of oil men April 7 and 8, when an attempt will be made to secure approval of plans to be presented to the board.

Reports reaching Washington from the Southwest indicate that the industry's plans will involve an interstate agreement on uniform proration laws, unit allocation, curbing of imports and equitable methods of withdrawal from storage. A full investigation of the situation will also be urged.

The administration also is making an effort to obtain an international agreement among the oil producing countries to prorate production, but it is understood the attempt so far has been unsuccessful. The state department is understood to have taken up with the other countries the feasibility of stopping the world-wide flood of oil, which has caused the collapse of oil prices, but it is doubtful whether any agreement can be reached at this time.

### Blame Not Hoover's

Administration representatives are incensed by the attempts to place the blame for the low price of oil on President Hoover, who has devoted much time to the question in the last four months. The strong statements issued by the independents as a result of the failure of tariff or embargo legislation at the last session of congress caused some of the presidential advisors to suggest that the administration wash its hands of the oil controversy.

High officials here are represented as generally believing that neither tariff nor embargo legislation offers a permanent cure for the problem of world-wide over-production, if there is any real solution at this time. The opinion is held that the best solution would be voluntary agreements among the oil states to prorate production and an agreement, conforming with the anti-trust laws, by the large companies to limit imports.

The oil situation was characterized as analogous to that of the wheat farmers, whose over-production, together with over-production in the other wheat countries, has caused a collapse of prices.

## East Texas Market Objective Is Placed at 300,000 Barrels

Austin, Texas.—Of outstanding interest and importance in connection with the hearings on proration which began March 24, was the statement by former Governor Dan Moody to the effect that his clients in the new East Texas area have an assured market for 300,000 barrels of oil a day. He pointed out that 33 purchasers have signified a need for that much oil, naming the following companies and their prospective daily requirements:

| | |
|---|---|
| Atlantic Oil Producing Company | 15000, |
| Arkansas Natural Gas Company | 40,000 |
| Chalmet Refining Company | 5,000 |
| Magnolia Petroleum Company | 24,000 |
| Vacuum Oil Company | 15,000 |
| Houston Oil Company | 10,000 |
| Crown Central Petroleum Company | 15,000 |
| Sinclair Consolidated Oil Corporation | 25,000 |
| A New Rusk County Refinery | 7,000 |
| Taylor Refinery | 40,000 |
| Pioneer Oil & Refining Company | 500 |
| Russell Oil Company | 600 |

The foregoing list covers an alleged demand for about 200,000 barrels, indicating that possibly other prospective purchasers would account for another 100,000 barrels. Some of the figures cited as the probable demand for East Texas oil were challenged by Robert R. Penn, Chairman of the Central Proration Committee, as being unjustified under present conditions and normal market requirements, being in conflict with nominations received and expected by the central proration committee.

Following is the report of the central proration committee, as submitted to the railroad commission, showing nominations made by purchasing companies:

| | | |
|---|---|---|
| Panhandle | 35,000 | |
| North Texas | 59,630 | |
| West Central Texas | 23,447 | |
| West Texas | 232,931 | |
| East Central Texas | 52,050 | (a) |
| East Texas | 50,000 | (b) |
| Southwest Texas | 63,000 | |
| Gulf Coast | 140,000 | |
| Total | 656,058 | |

(a)—Subject to 5000-barrel increases at Van on May 1 and June 1, 1931.

(b)—Subject to increase of 5000 barrels May 1, 1931 and

each month thereafter until a maximum of 70,000 barrels daily is reached.

In submitting the foregoing recommendations to the railroad commission, it was explained that nominations for the East Texas district, including Upshur, Smith, Gregg and Rusk Counties had not been received in sufficiently intelligible form, or based upon ratable takings, to enable the committee to report the total of nominations received. The figure of 50,000 barrels shown for East Texas was recommended at a meeting of the operator's committee for East Texas and was accepted by the central proration committee as being a reasonable and fair allowable for that area. The total for the state of 656,058 barrels was recommended to be placed in force by the railroad commission for a period of six months beginning with April 1, 1931.

### Proration Necessary

Whether or not East Texas finally submits to being prorated, or is forced to do so by legal decision, the evidence submitted by the central proration committee furnished conclusive proof that proration is necessary in the interests of conservation of natural resources. For example, it was stated by Umpire Capers that lifting of proration in Winkler and Ector Counties would result in losses of ultimate oil recovery of as much as 30 per cent. In Winkler County, alone, he stated that without proration there would be a loss of at least 2,000,000 barrels of oil.

Ray Richmond, Umpire of Yates and Crane-Upton fields placed the potential of Yates at 3,500,000 barrels, but stated that if this area was opened up for 30 days the yield would decline to but only 10,000 barrels a day. He offered testimony to show that the life of Yates would not exceed six months without proration, whereas if proration remains in force the field would be capable of producing from 80,000 to 90,000 barrels of oil daily for a period of 21 years. He stated that this field is capable of producing an ultimate yield of 690,000,000 barrels and if proration is lifted the recovery will be reduced to but 20 per cent of that amount, or a loss of 80 per cent.

The testimony presented before the railroad commission by various field umpires, in addition to the aforementioned, not only showed that proration was necessary to prevent physical waste but also removed to a large extent the threat of potentials that has been beclouding the horizon of the industry for the past two years. Since it was unanimously agreed upon by the experts testifying in favor or proration that present and indicated rates of production could not long be maintained without limitation of capacity, it is seen that the fears of potential are to a large degree founded more upon theory than upon actual fact. Thus, while there is actually a large potential underground supply of oil, it is obvious that it can only be recovered along conservative lines over a period of years.

The hearing ended March 28, after five days of strenuous argument for and against proration and is now left in the hands of the railroad commission. While an order may be issued to East Texas operators to begin prorating immediately, it is apparent that little will be done to abide by such an order. It is believed that the fight will be resumed in the near future and that every effort will be made by East Texas operators to force the railroad commission to recognize their right to provide oil for what they believe is a ready market.

## San Joaquin Valley Chapter Enjoys Interesting Meeting

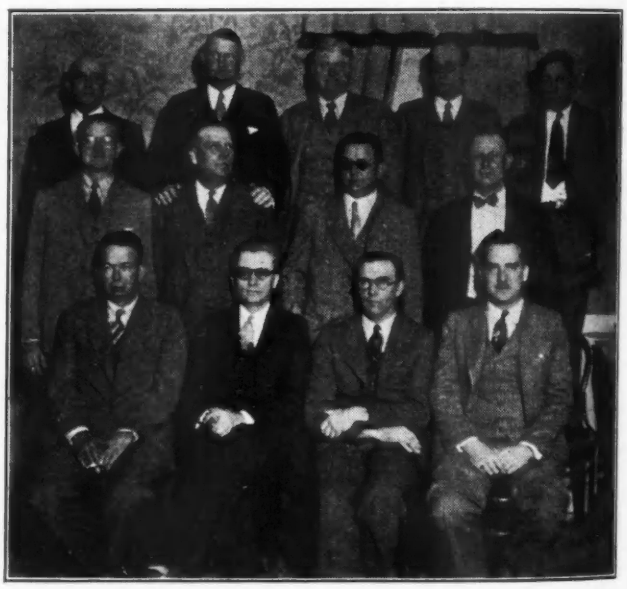
Taft, California.—The San Joaquin Valley chapter of the American Petroleum Institute was held here in the Recreation hall, March 24. Despite inclement weather, there was a large attendance of members and interested oil men.

"Operation of North Dome Kettleman Hills Oil Field Under the Unit Plan," was the subject of a paper presented by A. H. Bell, a director of the association recently organized for the development of California's largest oil field. Bell stated that the expected productive area of the North Dome is about 16 miles long and 2 2/3 miles wide, or a total of 21,200 acres; of this total the association will operate 10,800 acres; 9460 acres of fee land will be operated by Standard Oil Company of California in co-operation with the association; and 940 acres will be operated by companies which to date have refused to join the association.

He pointed out that the unit plan is for the life of the field and goes into effect April 1, when all wells, buildings, water lines, etc., will be turned over by members to the association for operation as a unit. Members will be credited with the oil and gas produced and will be charged with the drilling and operating expense by the association.

A few edge wells will be started this summer by the association and Standard Oil Company of California to define the productive limits of the field.

H. C. Eddy, chief engineer for Petroleum Rectifying



*Officers and Advisory Committee Members of the San Joaquin Valley Chapter of A. P. I.*
*Top Row, left to right: W. C. Cameron, Southern California Gas Company; W. J. Schultz, Willmax Oil Company; E. R. Pratt, Honolulu Oil Corporation, Ltd.; J. B. Wells, Kern Sunset Oil Company; W. R. Allen, Shell Oil Company.*
*Middle Row, left to right: E. P. Campbell, Standard Oil Company; G. I. Keniston, Standard Oil Company; J. J. Wilt, Standard Oil Company; G. E. Holmes, Lakeview Oil & Refining Company.*
*Bottom Row, left to right: R. R. Shinn, General Petroleum Corporation, chairman; C. L. Moore, Chanslor-Canfield Midway Oil Company, vice-chairman; P. C. McConnell, Standard Oil Company, vice-chairman; M. W. Morris, Standard Oil Company, secretary-treasurer.*
*Advisory Committee members absent from the group are: M. S. App, General Petroleum Corporation; D. B. Collins, Shell Oil Company; L. E. Foust, Associated Oil Company; R. L. Keyes, Texas Company.*

Company, Los Angeles, in his paper on "Emulsions and their Treatment", said that "When oil and water are associated in an emulsified form, the water will not separate from the oil on standing due to the fact that water droplets are surrounded by a tough membrane which prevents coalescence. It is generally believed that emulsions are not formed in the formation but are the result of severe agitation of oil and water in pumping equipment, or at the bean, in case of a flowing well.

He also pointed out that it is cheaper to produce emulsions and treat them by patented processes rather than try to prevent their formation, if a loss in production results from such an effort.

The more important processes which are employed to treat emulsions are distillation, centrifugal, chemical, and electrical. In most fields, only a few of these processes have proved practical from an economic standpoint.

Eddy's talk was illustrated by a motion picture film.

## Plan Drilling Symposium For Natural Gas Meeting

New York, N. Y.—Announcement of a tentative program of the annual meeting of the natural gas department of The American Gas Association, to be held at Memphis, May 11-14, 1931, states that there will be a drilling symposium on May 13, covering the East, Mid-Continent and Pacific Coast. The entire morning of May 13 will be given over to the discussion of drilling. J. French Robinson of the Hope Natural Gas Company, Pittsburgh, will cover the East; B. M. Nowery, United Gas Public Service Company, Houston, Texas, the Mid-Continent; speaker to be announced later, the Pacific Coast. Following the proposed outline, there will be open discussion on this subject.

Business meetings of the annual convention in Memphis will begin Tuesday, May 12, covering such subjects as gas measurement, pipe line flow, gas well deliveries, compression and transmission of natural gas, drilling and a production symposium, somewhat along the lines of the drilling symposium. The production symposium for the East will be discussed by S. W. Meals, Carnegie Natural Gas Company; for the Mid-Continent by R. M. Stuntz, Cities Service Company, Bartlesville, Oklahoma; for the Pacific Coast, speaker to be announced. Entertainment will also be included in the program during Monday, Tuesday and Wednesday.

## Organize Export Association At Second Meeting, March 25

Los Angeles.—The second meeting of the national association of American Petroleum Equipment Exporters was held in the convention hall of the Oil Equipment and Engineering Exposition in Los Angeles on March 25. A group of about 75 representatives of manufacturers were assembled and took definite action toward perfecting the organization. The meeting was presided over by W. R. Martin of Martin-Decker Corporation and was opened with a number of informal talks which emphasized the need of such an association.

L. C. Harbert of J. P. Ratigan outlined the work that had been accomplished by the temporary committee and gave his ideas of the scope of work which should be considered by the export organization. C. Homer Spotts of McEverlast, Inc., then presented information relative to the volume of export business being conducted in the Southern California area.

*Attendance at Export Meeting at Los Angeles*

In order to obtain the viewpoint of the American located in foreign fields who received equipment for application in those fields, L. G. Burt of Tulsa, Oklahoma, related some of his earlier experiences and expressed the opinion that the new association can do much toward developing good-will on the part of foreign operators toward American manufacturers.

Ray Dudley of the Gulf Publishing Company went further and stated that the American manufacturer must necessarily furnish the highest quality of equipment to the foreign buyer if he wants to increase the volume of his export business. He advised that many foreign countries are imitating the American but they are unable to reproduce the quality of his goods.

Among others who brought out the necessity for concerted action as is being contemplated by this export association was B. A. Cleveland of Regan Forge & Engineering Company. In order to get a more comprehensive expression from the assembly he called on J. S. Mellon of Byron Jackson Company and W. F. Huff of National Supply Company. Both of these men have had considerable experience in the export field and offered valuable suggestions for the consideration of the association.

A motion was then made by Mr. Harbert and seconded by E. L. Decker of Martin-Decker Corporation that a committee be appointed for the purpose of completing the details of the organization, the writing of the by-laws and the nomination of officers. This motion was carried unanimously and the following committee was named: W. R. Martin, chairman; L. C. Harbert; T. Sutter; B. A. Cleveland, C. Homer Spotts, J. S. Mellon and W. F. Huff.

It was suggested by J. H. Tinkham of Petroleum World that assistance be rendered this committee by a discussion on the aims and activities of the association as conceived by all of the members present. This suggestion was welcomed and many valuable thoughts were presented.

Before closing the meeting the ethics of the association were discussed and the idea of all present was to place them on the highest pinnacle possible and to require all members to follow them. The committee then decided to meet in Long Beach on Friday, March 27.

## Standard of California's Profits Show Decline

San Francisco, Calif.—Net income of Standard Oil Company of California for the year ending December 31, 1930, is reported at $37,675,300.61, or $2.93 per share, compared with $46,633,490.10, or $3.70 per share in 1929. The annual report of the company shows that in addition to the regular dividends of $2.50 per share, there was distributed an extra dividend of two per cent in stock, increasing the outstanding capital stock by 256,920 shares. Cash and marketable securities at the end of the year were $15,723,430.95, and the ratio of current assets to current liabilities was 9 to 1.

Holdings of the company include 1,194,354 acres of domestic developed and undeveloped oil lands, as well as 940,329 acres of foreign oil lands. Domestic holdings are divided over California, Colorado, Montana, New Mexico, Texas, Wyoming and Idaho, while foreign holdings include acreage under contract and held in fee in Colombia, Mexico and Venezuela. Storage capacity of the company as of December 31, 1930, was 89,189,632 barrels, an increase over 1929 of 1,768,839 barrels. The combined cargo and bunker capacity of the company's 23 ocean-going vessels and 18 bay, river and sound vessels amounts to 1,724,404 barrels.

Gasoline taxes collected by the company amounted to $14,271,873.00. Almost 60 per cent of this amount was collected in California. In this connection, the report states that the nation's tax bill for gasoline in 1930 amounted to more than $500,000,000, whereas the total tax bill of the railroads of the United States are estimated at $356,000,000. All taxes on automobiles, including gasoline tax, other taxes and license fees are stated to be three times the amount being paid by the railway transportation systems of the country.

## Humble to Withdraw as Buyer of Oil at Nocona, Montague County

Wichita Falls, Texas.—Withdrawal of Humble Oil & Refining Company as a purchaser of crude in the Nocona field, Montague County, is to become effective April 1. This company has been connected to about 90 wells scattered among 21 separate leases, and taking 360 barrels of oil daily from same. Stanolind Crude Oil Purchasing Company is the only other buyer in the field, and has promised relief for a number of operators that have sought aid since being informed of the forthcoming loss of a connection.

In excess of a dozen tests are to be drilled in central Archer County to the Canyon lime horizon which recently afforded a commercial oil producer at 208-10 feet in Deep Oil Development Company's L. F. Wilson 1, which is rated at 450 barrels of 41 gravity oil daily. This semi-wildcat test is located in the southwest corner of Section 76, A.T.N.C.L. Survey, and uncovered a new oil horizon for the county.

### ECONOMIC FIELD METHODS SUGGESTED BY ENGINEERS

(*Continued from page* 31)

Texas Company; L. C. Hawkins, Magnolia Petroleum Company; A. V. Hoenig, Indian Territory Illuminating Oil Company; J. E. Holm, Atlantic Oil Producing Company; R. K. Huey, Deep Rock Oil Corporation; R. F. McArthur, Barnsdall Oil Corporation; W. A. Martin, Sinclair Consolidated; Geo. O. Moody, Mid-Continent Petroleum Corporation; E. J. Nicklos, Continental Oil Company; Geo. Porter, Wirt Franklin Petroleum Corporation; F. O. Pryor, Stanolind Oil & Gas Company; W. C. Ricketts, Amerada Petroleum Corporation; Ralph Roark, Shell Petroleum Corporation; S. G. Sanderson, Gypsy Oil Company; H. F. Schoonover, Pure Oil Company; M. F. Wagner, Mid-Kansas Oil & Gas Company; and J. A. Wolfe, Prairie Oil & Gas Company.

The first paper of the afternoon was that of J. R. McWilliams, production engineer for Skelly Oil Company, who presented "A Plan for Better Utilization of Gas Energy in the Production of Oil." Briefly, Mr. McWilliams proposes limiting the quantity of gas withdrawn from the individual wells of a pool thus controlling the decline in mean reservoir pressure. The plan would necessitate drastic restriction in gas production from the first wells, allowing possibly just enough to furnish fuel for drilling and operating purposes until the majority of wells on a structure had been completed. The gas allowance per well would then be increased to whatever extent underground and market conditions appeared to justify, but in no case in his opinion should a flush pool produce in excess of 50 per cent of its gas capacity and this percentage should decrease in proportion to the amount of reservoir pressure and especially in proportion to the gas energy available. Apparently the morning session had been just a warm up for the engineers and they were in prime condition for argument at the conclusion of Mr. McWilliams' paper. The plan was objected to on the basis of its disregard for sand thickness, solubility, porosity, and other things which usually tend to defeat any plan of this sort principally because they are in a majority of cases unknown to any degree of accuracy at least until a structure has been fully developed. Further disagreement came on the point of disregarding individual well conditions. If the gas per acre allowance was set at 100,000,000 cubic feet per day the well with initial production of 4000 barrels would receive the same allowance as one with 25,000 barrels initial and the plan contemplates each operator securing maximum production of oil dependent upon his ability to efficiently utilize gas energy. It was generally agreed that the plan is a step in the right direction and that it offers possibilities of increased lifting efficiencies through better utilization of gas energy and a slower rate of production accompanied by increased ultimate yield.

The chairman called upon E. B. Reeser, president of the American Petroleum Institute, who had not been present during the morning session. Mr. Reeser welcomed out of town members to Tulsa and stated that he found it impossible to speak at a meeting of this kind without getting on the subject of proration. He recited the instance of a leader in the oil industry of California who recently asked how long he expected proration to continue. Upon his reply that it might last for three years or more the California friend expressed the belief that neither of them would live to see the day when we will not have proration although neither is old. In commenting on the present market condition Mr. Reeser assigned two principal reasons for failure of the price structure, namely, failure of purchasing companies to take allowable production which had been based on their nominations and large withdrawals from storage during winter months when production is normally expected to go to storage.

R. F. McArthur, vice-president, Barnsdall Oil Corporation, concluded the regular program with the presentation of a paper on "Unit Operation." Mr. McArthur discussed the general features of unitization in its present condition of progress and stated that in his opinion the greatest difficulty to overcome in furthering unit operation is mental inertia. At the conclusion of the paper Judge W. P. Z. German, chief counsel for Skelly Oil Company, presented his views on the legality of compulsory unitization pointing out that in his belief the legal fundamentals upon which

such compulsion would be based are older than the constitution of the United States. He referred directly to the old drainage laws whereby through petition of a small number of land owners an entire group could be forced to bear a proportionate part of the expense for the betterment of all.

In addition to the suggestions already mentioned two important points were stressed during the various discussions. The desirability of land and legal departments securing leases of longer duration is so obvious that it needs no elaboration. However, a method by which royalty owners can be convinced of the advantage of this extension is yet to come and until that time little progress will be made. Considerable attention was given the point of world reserves. The meeting was in general agreement that there are now in sight sufficient reserves to supply the crude oil demand from a long period of time with likely possibilities for an almost indefinite supply. It was suggested that this gospel be preached in opposition to the old belief that conservation must be prosecuted diligently lest we exhaust our supply of oil and gas within a few years.

## SOME ECONOMIC ASPECTS OF OIL PRODUCTION

(*Continued from page* 35)

tors stand to benefit additionally by reason of the fact that the economic productive life of each lease has been lengthened materially. The writer is convinced that the opportunities for us to perfect such advantageous exchanges of properties are almost limitless, and should be taken full advantage of by all of us interested in reducing our recovery costs to the minimum, while at the same time extending the productive life of our small and relatively isolated properties. This plan, while not anything like so desirable as the complete unitization of a given pool, is nevertheless a constructive step in the right direction, and will make for improved economic conditions in our small, and now rather hopeless, situations.

### Much Knowledge Gained

As a natural corollary of proration, experienced by most of us in many of our operations during the past few years, doubtless we have gained knowledge from such experiences that will prove of continuing and accumulative value in future operations. At least this is the case of the writer. The company with which he is associated has, like all others, taken great pride in the efficiency of its producing operations and no stones have been purposely left unturned in an earnest effort to reduce to the lowest possible minimum the down time of individual units. It may be heresy to now say so, and it certainly plays havoc with one of our pet operating theories, but it seems quite probable that we were actually overdoing this matter of efficiency. Certainly, a favorable efficiency or down time record attained at any cost is not usually economic. Putting the matter another way and in somewhat clearer fashion, we have definitely ascertained that we pay dearly in obtaining, or endeavoring to obtain, the last 10 per cent—let us say—of the productive capacity of a well. We have learned that in the great majority of cases the slowing down of the tempo of pumping on a given well or an entire property, whether it be forced on account of proration requirements, or deliberate by reason of a voluntary and purposeful policy, results in a lowering of recovery cost more than offsetting the loss, if any, in the volume of oil obtained. Putting the matter still another way and in the language of the boys on the firing line, "pouring it on 'em," and "pounding 'em on the back" doesn't pay under market price conditions such as now obtain, if in fact it ever does. A greater appreciation of this fact is just one more point that should be chalked up to the credit of proration and to our experiences growing out of the existing economic conditions.

## ON AND OFF THE DOME AT KETTLEMAN HILLS

(*Continued from page* 42)

depending upon the competency of the beds to withstand a strain without cracking. Here we may mention that rock which appears brittle in hand specimens often is either elastic or plastic in large bodies. A short strip of glass is stiff and brittle, yet a longer piece of the same section can be bent into a loop. Given time in a curved position it will take on permanent curvature.

Successive folding, accompanied by continued deposition, results in the stratigraphic conditions shown in Figure 4. Here beds of post-Brown Shale age are not uniform in thickness, but feather out toward the fold. Sealing of sands by shales, providing for gas and oil traps, is a probability. Off the dome, then, the drill may find still another class of deposit, as indicated in the diagram. It is evident that the continued folding suggested here will provide a series of these "buttress sands" on upward to the surface, and this feature is ignored in the present drawing.

Regardless of our attitude toward the other drawings, this one certainly deserves our attention, for these conditions exist beyond doubt in the West Side Coalinga field and on the east flank of Buena Vista Hills, areas within the same geosynclinal basin and not remote from the dome itself. In the former field the buttress sands feather out toward an outcrop in the immediate hills. Many have felt that asphalt, as a residue of evaporated oil, has prevented the escape of oil lower down in the formation, but this seems very improbable in the light of known buttress conditions.

At Buena Vista Hills we know from micropaleontological examinations that production off the dome proper is coming from beds not only which are stratigraphically higher than those on the dome, but also which are entirely absent on the dome.

As to the immediate vicinity of the dome we do not know whether the gas at Dudley Ridge is from uniform beds which extend over the dome or from beds as shown in this drawing. All we can say is that Figure 1 does not provide for this accumulation, whereas any one of the last three does so. Furthermore, we have the case of the Bolsa Chica Ferguson well. Most geologists believe that the Brown Shale was not penetrated; some few do believe so. Possibly this well hit a buttress sand as here shown. Who knows today?

Our four drawings do not cover all possibilities. Others are conceived as combinations of 2 and 3, 2 and 4, 3 and 4, and 2, 3 and 4, with variations as noted or implied. Such combinations do not require further elaboration; they only make a complex situation more complex.

Well, we know how the Kettleman Hills field appears from the air today, but we do not know how it will look 10, 25, or 50 years from now. However we may feel about this area, we must admit that nature holds many subsurface secrets from us and the surface can only be visualized as these secrets become known. The field is very great, and also very young.

Now for the lyres once more, and let us all join in.

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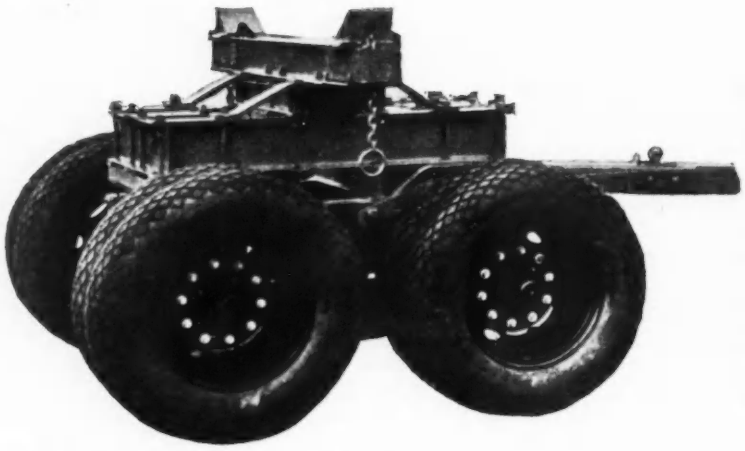
*Three-point suspension with rocking bolster effect over front axle provided to permit moving over rough places without getting frame in a cramp or strain. Provision made also for front axle turning sufficiently for trailer to follow truck around curves or making turns without skidding wheels or wearing tires.*



*Frame is all-steel; axles of highest quality, equipped with Timken roller bearings. Martin four-wheel or two-wheel trailers manufactured in sizes and capacities to match truck used, and equipped with either heavy duty high pressure or heavy duty balloon tires in sizes as preferred.*

MARTIN trailers are continually building that same fine reputation held by MARTIN wagons throughout the oil fields of the world. The same high class material and workmanship that made MARTIN wagons famous is found in MARTIN two-wheel and four-wheel trailers.

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# MARTIN WAGON CO.

## LUFKIN, TEXAS

# News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

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## Activity at Kettleman Hills Confined to Deepening Tests

Coalinga, Calif.—Deepening of a few additional wells at Kettleman Hills and the impending completion of tests on various parts of the North Dome will constitute the principal field development here until a more definite development program is started. The great potential possibilities of this field is a real temptation to operators holding fee land, and permit holders will be forced to drill or open offsets over a considerable area.

The action of individual wells now producing is interesting and has thrown much light upon the probable value of the field. Petroleum Securities Company's Felix 2, completed several weeks ago with an initial production of 5400 barrels, has increased its flow slightly and is producing the remarkably low total of 5,500,000 cubic feet of gas. This is only 1000 cubic feet of gas per barrel of oil, as compared with a gas-oil ratio of more than 1:40,000 in other wells.

Superior Oil Company's Huffman 1 is producing 11,300 barrels of oil and only 18,600,000 cubic feet of gas. These two wells were completed much deeper in the producing zone than the first producers and are flowing much heavier oil.

The decline of all completions, except the two mentioned in the previous paragraph, has been slow but steady. Upon completion, the average gravity of the oil from the first five wells was above 60, and is now even higher. The top of the Temblor zone contains principally gas, with the natural gasoline accounting for the bulk of production and the high gravity product.

The Kettleman North Dome Association will deepen the wells it deems the most necessary offsets and, will drill additional wells as it sees fit. Standard Oil Company, in an unofficial way, a party to the unit plan, will cooperate by drilling only necessary wells. This company holds more than half of the acreage on the North Dome.

## Huntington Beach Operators Buying Protective Acreage

Huntington Beach, Calif.—Several companies which are not anxious to participate in deep drilling in the Huntington Beach field are nevertheless protecting themselves by purchasing available lots in widely scattered sections of the area. It is not unusual to prepare for intensive development in the absence of definite assurance that a questionable zone will produce. In several California fields during recent years, false starts have been made, with both majors and independents participating in the race toward a mythical zone.

Superior Oil Company is deepening two wells, following the shutting down of its original deep test at 7491 feet. Such a policy indicates that the company believes it has found a productive zone, and apparently is anxious to deepen at least two more wells to participate in deep production, should the first test prove successful. Union Oil Company recently purchased two lots and other large companies have obtained small tracts. W. E. McCaslin is coring in hard shale and sand at 7533 feet in Transport 17, which may be the first well to be tested in the deep zone.

Stevenson Brothers have cored oil sand below 4400 feet in La Bolsa Title 1, a wildcat test just outside the field. A string of casing will be run for a production test. The well was drilled to 4495 feet and the absence of streaks of gray (water) sand gives the well a better chance at production.

## Playa del Rey Deep Zone Shows Decline Near Top of Structure

Los Angeles.—The deep zone at Playa del Rey, which has for some time offered the best chance for profitable production, is showing a slow decline in wells near the top of the structure and there is evidence that wells properly spaced may pay out when completed around 6000 feet. The discovery well was completed at 6200 feet on the flank of the structure. Subsequent discovery of commercial production in a shallow zone was just the development that the townlot operators wanted and soon the chief interest was centered in this formation. The shallow zone proved to be a very low pressure area and not an outstanding completion was recorded.

It is to be regretted that townlot tactics were employed in the development of the shallow zone. Correct spacing of wells, it is generally believed, would have resulted in a nice little field. The wells were small, but the decline was slow and production would have been profitable under sensible development. As it was, wells were crowded on very small lots, and even high pressure areas would not have paid out under such a strain. Most of the wells started were finished and the shallow sand has responded with all it had, but too many holes have been drilled for sustained production.

On top of the structure, east and south of the discovery well, the deep zone may prove uniformly productive. This formation has been a disappointment in other parts of the field, but conservative development will result in an additional production. Ohio Oil Company's Recreation Gun Club 4 has established a new potential of 2000 barrels and is perhaps the best well in the field. It is east of the bulk of production and not closely offset by deep zone wells.

Flank wells generally have shown more oil sand in the deep zone than those drilled on top of the structure. This condition may have been caused by a greater penetration on the flanks, where sharp dips are the rule, rather than through a greater thickness near the edge of the field. A straight hole may stay in oil sand longer on the dips than where the sand lies nearly flat on top of the structure, with the sand thickness being uniform all over the field. The deep zone at Playa del Rey has not been uniform but it has

an average thickness sufficient to yield good wells under favorable conditions.

As might be expected in a field divided between townlot development and conservative drilling, activity in the former section is practically at a standstill, while operators holding the larger blocks are going ahead at about the average rate. Union Oil Company is drilling three wells and recently made two more locations. This company was generally offset by the townlot activity but was forced to drill only one line of wells to protect its large acreage. Ohio Oil Company also controls a large block and may ultimately prove to have nearly one-fourth of the field. Union Oil Company apparently controls nearly one-half of the potential production, with the townlot section accounting for the remaining one-fourth.

Of the 24 drilling wells, more than half probably will be completed in the deep zone. The wave of excitement has subsided for the townlot operator and there is no longer need to rush wells to offset shallow producers.

The best shallow zone producer is flowing less than 550 barrels per day. Most of the wells are on the pump and it was not unusual to start a completion out in this manner. The deep zone wells flow longer and better, having more useful gas.

## Crude Marketing Association Formation Is Making Progress

Los Angeles.—Further progress has been made toward formation of a co-operative crude oil marketing association, which will handle the bulk of oil produced in California by independent operators. The new organization will be called Oil Producers' Sales Agency.

Articles of incorporation have been forwarded to Sacramento and the following have been tentatively placed on the board of directors, subject to revision: R. R. Templeton, William Keck, Neil Anderson, Joseph B. Dabney, Rush M. Blodgett, Hooper Dunbar, A. T. Jergins, R. A. Broomfield, Alphonzo Bell, C. B. Watson, C. C. Spicer, John B. Elliott, A. C. Mattei, Ralph B. Lloyd, S. A. Guiberson, Jr., Charles Jones, Ed McAdams, Fred Bixby, J. J. Doyle, C. A. Johnson, Dana Burks, R. A. Collom, R. R. Bush, R. M. Sands and Burton Green.

The new organization will handle only crude oil, but companies with both producing and refining facilities may turn over a portion of their crude not used. The principal purposes of the organization will be to procure for its members a market for their crude oil, to obtain the orderly delivery and sale of the same, to assist in obtaining for its members reasonable and fair prices for their products in open markets, to advise members as to the available market and the volume of each commodity which may be sold, to cooperate with members in keeping available supplies of various commodities within reasonable limits of sales outlets, to provide capital for financing the actual cost of the services by assessing members a certain rate upon their sales of various commodities and generally aiding members wherever possible.

Independent producers in California are producing more than 45 per cent of the total output and most of this total was represented at the first meeting.

One of the chief aims is to reduce production to 500,000 barrels. The present surplus of 30,000 barrels is just enough to annoy the nerves of the market. The organization will act only as a marketing agency and will not attempt to buy or build pipe lines and storage facilities.

## Industry in California Divided on Legislation

Sacramento, Calif.—Sharp differences in opinion have arisen over proposed legislation which will affect the oil industry. A measure which would in effect make the oil business a public utility is being considered, but most of the smaller companies object to it on the ground that it would turn the industry over to the larger companies.

The bill is called a conservation measure and has the support of many larger companies. It is supposedly designed to prevent a flood of oil from flush fields. One independent producer, refiner and marketer told the legislative committee that some of the smaller companies could get gasoline to market cheaper than the larger companies, and that this had angered the larger companies. Some of the major companies would like to have repealed that portion of the present gas conservation law which gives the state the right to fix a gas-oil ratio. Some of the independents claim that the ridiculous gas-oil ratio being maintained by some of the major companies in flush fields is responsible for a desire to eliminate this clause. Efforts to pass measures which will control townlot drilling may bear fruit, but there is doubt whether any bill passed will be strong enough to avoid technicalities.

A compromise to allow deepening in old fields may lead to a double-barrelled action which will affect new and old townlot areas differently. The independents are lined up against the majors on most issues and the lack of harmony has prevented more constructive legislation.

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Santa Barbara, Calif.—The Sespe sand may prove productive at Elwood, but there is yet no proof that it will become a factor in the field output. The joint test of Barnsdall Oil Company and Rio Grande Oil Company, Bell 14, is coring ahead at 4410 feet, with the formation running to sand and shale. The Sespe zone was found considerably shallower but no tests have been made. A good gas pressure was developed at one level below the top of the zone. Production at Elwood comes from the Vaqueros zone and Bell 14 is purely a test of the formations below the present producing sand.

## Operations on Tideland Test Off Coal Oil Point Resumed

Santa Barbara, Calif.—Bolsa Chica Oil Corporation has resumed operations in Augur 191-1, a tideland test off Coal Oil Point, following a shutdown of several weeks. This well, located several hundred feet out in the Pacific Ocean and a test of a subterranean structure, was for a time regarded as the most promising wildcat in California.

The Vaqueros zone was found at 4020 feet and a string of nine-inch casing cemented at this point for a production test. The well was drilled to 4191 feet, but plugged back to 4150 feet when a questionable body of sand was cored. The first 50 feet of sand showed oil and gas, with the formation gradually showing a tendency toward water. A plug was set at 4150 feet, but it is doubtful it eliminated all of the trouble. The hole will be cleaned out a short distance below the show of the nine-inch casing before recementing.

On the first production test, the well flowed about 1000 barrels of water and 100 barrels of oil, but never made such a good showing during subsequent tests. The geology was done by men in boats and by a diver who worked over a wide strip.

## Rush to Develop Temblor At North Belridge Stops

Bakersfield, Calif.—The rush to develop the Temblor zone in the North Belridge field has subsided somewhat and unfavorable developments of the past three weeks may serve to limit operations still further. Failure of Union Oil Company's Belridge 17 on a production test was a disappointment, since the well was supposedly located on the structure. The action of the well may have been caused by a faulty cementing job, rather than poor sand conditions. A string of 6⅝-inch casing is being cemented at 5350 feet, this extra string to serve as another water shutoff. The well was drilled to 5540 feet.

The Texas Company has shut down Martin 1, an indirect offset to Richfield Oil Company's Belridge 1, recently abandoned after several tests between 5700 feet and 6500 feet.

## Lost Hills Deep Tests Show Weakness of Temblor Strata

Bakersfield, Calif.—Further tests in deep wells in the Lost Hills field have been far from impressive, and the Temblor zone does not seem to hold a distinct threat. Universal Consolidated Oil Company cemented the five-inch casing for the third time at 5200 feet, after drilling to 5303 feet, but upon cleaning out to bottom failed to get more than a trace of oil. The hole was swabbed down with little effort and little water was in evidence. Failure of the well to produce under fairly satisfactory conditions makes deepening about the only course to pursue. This well has been tested several times below 5000 feet, but showed little oil and gas at any time.

George F. Getty's Lincoln 1A, Section 12-26-20, has been drilled to 3825 feet but has had difficulty in shutting off water over the top of or in the Temblor zone. A complete water shutoff may not be obtained, but if the flow can be reduced to allow deeper drilling, the Temblor will be tested at more favorable depths. General Petroleum Corporation has passed 1500 feet in its first deep test in the field and will soon reach the Temblor formation.

The outcome of these three tests should largely determine the possibilities of the deep zone in this field.

**OPEN FLOW TEST OF CALIFORNIA MIGHT HELP HOPELESS SITUATION**

(*Continued from page* 25)

the theory that the longer a correction is postponed, the more serious will be the consequences.

A few operators believe that curtailment should be discarded in favor of the old-fashioned method of producing and selling as much oil as the market will take. They further emphasize the so-called inconsistency of low priced crude in the face of satisfactory curtailment. It is claimed by some that they have reduced their output almost by half, only to find their income reduced by another halt through crude price reductions. Lower oil prices have not strengthened curtailment, especially among those who have participated in a lukwarm manner.

### Curtailment Threatened

Curtailment appears to be effective in bringing a small gap, but there is doubt whether it can bridge a whole ocean. The chief hope for curtailment seems to lie in an even smaller production than California is now recording. Throwing overboard of the entire curtailment program would throw the industry into a state of chaos, but many believe that it would require less time to adjust production to consumption in this manner than through curtailment.

Drilling has declined to a very low ebb, and in this slump lies a distinct ray of hope. Evenutally, consumption will catch up if development of the flush fields does not come forthwith. The pendulum will swing back toward intense activity from the present low level, unless history fails to repeat itself after a dozen repetitions. Danger of a flood of oil is possible from Kettleman Hills, Huntington Beach and perhaps other fields, but the rapid decline of drilling in many fields certainly points toward a smaller potential by virtue of a future inactive period of considerable duration.

An open flow test would be a good thing for California. The potentials probably are too high, but how much too high nobody knows. Such fields as Long Beach and Santa Fe Springs probably would fall considerably short of their rated potentials. Where an operator has specific evidence that a field or lease can not produce its rated potential, he becomes suspicious and often starts rumors which are unfair to the umpires and curtailment committees. Engineers closest to the situation claim that California can not produce anywhere near its rated potential. Which brings us to the question of whether or not it would improve matters to arrive at the true potentials. It is a known fact that the state can produce much more oil than it is now producing, even if much of the shutin production is represented by heavy oil.

The principal purchasing companies are gradually awakening to the fact that they can not take more oil than they need over a long period of time. It makes no difference how big the company is, it is courting disaster when it continues to pile up unnecessary stocks. At least two California companies are beginning to realize that they must exercise care in surplus purchases. They may want to be good fellows and maintain a high price, but ultimately they will be forced to withdraw. These two companies have been the backbone of purchasing organizations and ar estill entirely sound, but they are anxious to limit purchases to some level near actual demands, while reducing their stocks. In reality, purchases should have been limited during the height of overproduction, but through false pride, the principal purchasers were afraid to let it be known that some of the oil produced in California could not be readily assimilated by a market ready to break under ordinary circumstances.

### Foreign Demand Declines

The foreign demand for California crude has declined some, just as the demand for crude from other sections has witnessed a drop. World markets have always called on California to supply a large portion of their needs, and are still calling on her—but on a slightly reduced scale. The general depression has prevented the normal increase in domestic consumption, but it has been over-production, rather than under-consumption, that has most trouble for California.

In the final analysis of the situation, it must be admitted that the laws of nature—economics, if you want to call it that—have been broken, and everybody connected with the oil industry is paying for a long period of overproduction. Everybody knew that too much oil was being produced, but it was hoped that a turn for the better would be witnessed before disaster came their way. The law of supply and demand will ultimately take a hand, and as slow as it has been, it evidently is taking a hand. At least, something seems to have taken a hand.

The major companies claim they wanted to do the right thing, the smaller operators claimed they wanted to do the right thing. Both produced too much oil. Both are now paying for it.

# Oil and Gas Pipe Line Activities

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## Line from Joiner-Bateman Area to Be Started April 1

Shreveport.—Actual laying of an eight-inch oil line from the Joiner-Bateman field of Rusk County, Texas, to the Atlas Pipe Line Company, Incorporated's refinery at Jewella, a suburb of Shreveport, was expected to begin by April 1, according to Simmons and Nusser of Shreveport, who have been awarded the contract to lay the line from the Texas-Louisiana line to Shreveport. The Atlas will itself lay the line from the Texas line to the Rusk County terminus.

The line will be electric welded and pipe has been ordered from the Jones and Laughlin Steel Corporation of Pittsburgh. The Fleet weld process will be employed. Cutting of a right-of-way for the line was under way late last week.

Atlas Pipe Line Company, Incorporated, and Spartan Refining Company, Incorporated both headed by Samuel D. Hunter and E. R. Ratcliff, recently acquired the 10,000-barrel refinery at Jewella and other properties of Shreveport-El Dorado Pipe Line Company. The properties included an eight-inch line from Shreveport to south Arkansas.

A new subsidiary has been formed by Arkansas Natural Gas Corporation to operate that company's subsidiary, Arkansas Fuel Oil Company's 66-mile eight-inch electrically welded line from Gregg County, Texas, to Shreveport. The new unit of Arkansas Natural to operate the line is Arkansas Pipe Line Corporation having the following officers: Henry L. Doherty, president; D. W. Harris, vice-president and general manager; E. N. Watkins, secretary, B. R. Muirhead, treasurer; and H. L. Dickerson, general superintendent. Gordon L. Gano will be in active charge of the new organization, whose officers are identical with those of Arkansas Natural Gas Corporation. Work on this line starts this week.

## United Gas South Louisiana Line Making Slow Progress

Houston.—Progress of United Gas System on its Southwest Louisiana pipe line project has been relatively slow because of unfavorable weather and boggy ground caused by flooded rice fields and overflowed rivers.

Work was speeded on the Kirbyville-Fenton section of the main line in order to have natural gas service available to Lake Charles as soon as possible. The Fenton-Franklin section of the trunk line is about 80 per cent complete, with exception of river crossings, which are held up on account of high water, both the Sabine and Calcasieu Rivers having given much trouble. The former crossing is about 80 per cent complete, however, and work on the latter will commence as soon as high water recedes.

On the DeQuincy-Merryville lateral line, city meter and regulator station there has been considerable progress. Other work which has progressed to considerable extent includes the Lake Charles-Westlake branch line and meter and regulator station; the Kinder-Marksville branch line and measuring station; the Rayne-Church Point tap line and meter and regulator station; the Lafayette-Breaux Bridge tap line and meter and regulator station; and the Milton-Erath tap line and meter and regulator station construction jobs.

Work also has commenced on the telephone system for the Southwest Louisiana project. Work on the Westlake distribution system has started.

## Sinclair-Texas Pipe Line to Kilgore Field is Progressing

Henderson, Texas.—Sinclair-Texas Pipe Line Company is proceeding with work on a six-inch pipe line across part of the Kilgore field to a tank car loading rack site alongside the International-Great Northern railroad; and on that location a 50-car capacity loading rack is being built, provision being made for tracks on both sides of the rack, each with a capacity of 25 cars.

The loading rack site is on the Brown & Hill 40-acre lease (J. N. Peterson lands), Isaac Ruddle Survey, Rusk County, and extending northerly into the Ellis & Erwin 16-acre lease (J. N. Peterson land). It is 2.2 miles southwest of Kilgore.

The pipe line will extend due south from the loading rack through the Sevier Survey approximately to the center of the R. E. Winn Survey.

## Magnolia Plans 10-Inch Line for Joiner Field

Tyler, Texas.—Invasion of the Joiner field with a pipe line connection is to be made immediately by Magnolia Pipe Line Company as result of having contracted to handle 10,000 barrels of oil daily from the East Texas district to the Gulf Coast for Tidal Refining Company on a common carrier basis. Magnolia Pipe Line Company is moving in equipment to erect a field station on the southwest edge of the Joiner field, with 22¾ miles of six-inch welded line to extend due east and tie into the company's recently completed 10-inch trunk line system, near the Rusk-Panola County line.

Tidal Refining Company is to install its own gathering systems in the three East Texas areas, and tender the oil direct to Magnolia Pipe Line Company's stations in each of the fields. The former will take care of the entire output of Tidal Oil Company, which is confronted with a large drilling program, and will also probably purchase outside oil from time to time.

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Tulsa.—The Muskogee-Okmulgee 36-mile unit of Great Lakes Pipe Line Company's gasoline carrier is scheduled for completion not later than April 15, at which time Pure Oil Company will be connected to the main line which is now delivering gasoline from Continental Oil Company's refinery at Ponca City and Barnsdall Oil Corporation's refinery at Barnsdall, via Barnsdall to the Great Lakes terminal at Kansas City. Gasoline was first turned into the main section at Ponca City, January 27, to be joined at Barnsdall by gasoline from the Barnsdall plant. So far these two organizations are the only ones of the six companies interested in the venture to be directly connected to the main section.

# Oklahoma--Kansas Field Notes

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

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## Checking Seminole's Upper Formations Proves Futile

Seminole, Oklahoma.—Checking on upper formations in the Seminole district means little in regard to predetermining the possibilities of wildcat tests being structurally high enough to produce. Lippa Drilling Company et al's Phillips 1 SW SW SE, Section 8-9n-6e, was approximately 35 feet low on top of the Mayes lime as compared with Minnehoma Oil Company's Noe 1, an 8000-barrel well in the NW of Section 17-9n-6e. On the base of the Woodford the Phillips 1 had gained 20 feet and was only about 15 feet lower than the Minnehoma well. Viola lime was encountered at 4136 feet and a steel line check revealed 11 feet of correction making top of that formation at 4125 feet or about the same structural height as the Minnehoma, No. 1. It has been suggested that the hole be surveyed for horizontal deviation from vertical and if this is done an additional correction may be found. At any rate the test is looking good and there is very little doubt that it will be the discovery well in a new pool of limited size.

Prairie Oil & Gas Company's Foxico 5, SE SE NW, Section 2-8n-5e, in the Carr City pool, topped the Wilcox at 4176 feet and swabbed 185 barrels in 10 hours from a total depth of 4193 feet still in the sand. It flowed 45 barrels from the Hunton through a bradenhead. The Wilcox will be shot.

## Oklahoma Average Production Declines 19,000 Barrels Daily

Tulsa.—Estimated daily average production for Oklahoma dropped approximately 19,000 barrels during the past week when the state avaraged 551,975 barrels. The reduction came about through a decline of 29,000 barrels in the daily production from the Oklahoma City pool which averaged 120,755 barrels.

Production in the Seminole district is due to take a decided drop during the next few weeks since the 20 days of open-flow potential tests were concluded on March 25. Preliminary figures on these gauges indicate that the potential will be about 337,000 barrels daily, or 11,000 barrels higher than the estimated potential which was based on a three per cent per month decline from a 399,000 barrels potential taken in May, 1930. Daily average production for the entire Seminole district was about 150,000 barrels during January and February or less than 50 per cent of the actual potential as determined through the recent gauges. This group of pools has been entitled to take 50 per cent of potential under proration regulation governing since the tests taken in May, 1930. Estimated daily average production for the week ending March 23 was 195,803 barrels, an increase of 22,584 barrels over the week before.

During the week ending March 23 the daily average outlet from the Oklahoma City pool was 141,848 barrels and the daily average production for the same period was 137,424 barrels. Sinclair-Texas Pipe Line Company's runs north from the pool averaged about 28,000 barrels while gross oil receipts from the pool were approximately 36,000 barrels indicating that 8000 barrels went to storage daily. Daily average runs by companies for the period were as follows:

| | Barrels |
|---|---|
| Anderson-Pritchard | 432 |
| Capitol | 893 |
| Century | 3,005 |
| Champlin | 4,116 |
| Continental | 7,790 |
| Crude Oil Transportation | 551 |
| Empire | 20,034 |
| Magnolia | 4,016 |
| Oklahoma | 14,609 |
| Operators | 2,622 |
| Peacock & Peveto | 97 |
| Prairie | 1,577 |
| Shell | 4,485 |
| Sinclair-Texas | 27,938 |
| Stanolind | 46,181 |
| Tidal | 3,223 |
| Wilcox | 279 |
| Total (Barrels Daily Average) | 141,848 |

## Developments Indicate Two New Oil Pools for Kansas

Wichita, Kansas.—Developments of the past few days indicate the likelihood of two new pools for Kansas. Aylward et al's Stratman 1, CSE NW SE, Section 1-17s-10w, is shut down for the erection of tankage with a hole full of oil from "Siliceous lime" at 3250 feet to 3255 feet, corrected. It is located about three miles north of T. B. Slick Estate's Heiken 1, which was recently shut in after being estimated as a 2000-barrel well. Both are in Ellsworth County, and directly north of the Schurr-Raymond pool. Cress et al's Sharp 1, SE NE, Section 13-20s-10w, slightly over three miles northeast of the Schurr-Raymond pool in southwestern Rice County, had a hole full of oil six feet in the "Siliceous lime" at 3336 feet and was flowing at the rate of about two barrels per hour when last reported. Both of the new wells will probably be shut in after completion due to a lack of demand for oil from this area.

Four wells in the Ritz area were holding the spot light in this most important district. Dickey Oil Company and Shell Petroleum Corporation's Williams 1, NE NW, Section 26-19s-2w, on the south flank of the Decker gas structure, topped the chat at 2895 feet and has first pay at 2937 feet. At that depth it started making 2,000,000 cubic feet of gas and spraying oil at the rate of five barrels per hour. Within a short time the gas flow had increased to 3,500,000 and oil was estimated at 50 barrels per hour. Structurally it is seven feet higher than Youker et al's Gratton 1, SE SW SW, Section 24-19s-2w, one location north and over a half-mile east of it. The Gratton well was primarily a

gas well but is making small amounts of oil. Olson Drilling Company and Shell Petroleum Corporation's Johnson 1, SE NW SE, Section 36-19s-2w, an old chat producer being deepened, topped the Viola lime at 3397 feet, one foot structurally lower than the Garrett 1, discovery well in the Wilcox.

At last report the Johnson well was slopping over while cleaning out after having penetrated the producing formation only a few inches, Miller and Shell Petroleum Corporation's Blair 1, NWc, Section 32-19s-1w, being drilled deeper after failing to find commercial production in the chat, was drilling 31 feet in the Viola lime at 3462 feet and showing only a small amount of oil. It is located about one-half mile southeast of the discovery well and is only 13 feet structurally lower. Derby Oil Company and Empire Oil & Refining Company's Domsch 1, NE NW, Section 6-20s-1w, on the east flank of the Ritz pool structure, is four feet structurally higher than the discovery well. During the first three hours it swabbed at the rate of approximately 90 barrels per hour while six feet in the Viola lime at 3414 feet. Present indications are that the Wilcox structure will cover a considerable area and that the Decker gas structure will yield oil in commercial quantities from tests located farther down the structure and that wells now on the edge of the gas area should eventually produce oil.

## Oklahoma City Has Seven Completions During Week

Oklahoma City.—Seven wells were completed in the Oklahoma City pool during the past week and several are ready for completion. The most interesting test at the present time is that of W. H. Riddle et al's Giles 1, NEc SW Section 15-11n-3w, approximately two locations west of the Oklahoma City Petroleum Company's Lively 1, which was recently completed at an estimated 2000 barrels per hour. Sand in the Giles well is reported structurally higher than in the Lively 1 and its chances for big production seem very good. Indian Territory Illuminating Oil Company et al's Adeline Billen 1, NE SE SE Section 26-11n-3w, on the southwest edge of the older portion of the pool, encountered the sand low and had just a trace of oil; it will be abandoned. The same company's Earps 1, NEc Section 22-11n-3w, about 1½ miles northwest of the Billen well and also on the southwest edge of the structure, had the base of the Pennsylvanian at 6405 feet and top of the School Land sand at 6580 feet. It produced 1776 barrels in eight hours along with gas at the rate of 8,000,000 feet from a depth of 6620 feet. One well in the north end of the pool made a relatively poor showing but may be improved by additional work. Champlin Oil & Refining Company had top of the Wilcox sand at 6327 feet and produced only 56 barrels in 30 minutes flowing by heads from 177 feet of Simpson material, from its Seal 2, NW SW SW Section 2-11n-3w; total depth is 6504 feet.

Phillips Petroleum Company completed the largest well of the week when its Temple 1, NE NE NW Section 10-11n-3w, came in flowing at the rate of about 50,000 barrels with 33,000,000 cubic feet of gas. The initial four-hour gauge was 8405 barrels produced under a back pressure of 325 pounds. Wilcox Oil & Gas Company et al's Wright 1, NW NW SW, Section 10-11n-3w, on the extreme west edge of production, gauged 2055 barrels during the initial four-hour period from 195 feet of Simpson formation topped at 6362 feet. Phillips Petroleum Company's Schillings 1, SE NW NE SW, Section 10-11n-3w, penetrated Wilcox sand from 6409 to 6540 feet and was still in the sand at the latter depth. The four-hour gauge was 7034 barrels with gas at the rate of 33,000,000 cubic feet. J. E. Mabee et al's Ben Mills 1, NE SW NE NW Section 10-11n-3w, is cutting off drill pipe which was stuck in the hole when trying to complete the well some time ago. Without further mishap the remaining 450 feet of pipe should be recovered and the well completed some time this week. Top of the Wilcox is at 6338 feet and total depth 6510 feet.

## Carter Starts Interesting Test in Southern Oklahoma

Ardmore, Oklahoma.—One well was completed and two are shut down waiting on cement to set on the last string of casing in the Tatums pool in Carter County. Carter Oil Company completed one of its few operations when it swabbed 1187½ barrels of oil during the first 19 hours from its Paul Robb 1, NW SW NW Section 19-1s-2w, on the extreme eastern edge of the pool. Production is coming from sand and shale logged between 1741 and 1856 feet. Total depth is 1896 feet in shale. Amos Drilling Company's Hooks 2, SW SE SE Section 13-1s-3w, on the northeast edge of the pool, was still shut down awaiting favorable weather after setting liner and starting to bail earlier in the week. Broken oil sands were encountered at 2005 to 2108 feet and solid sand from that point to the total depth of 2199 feet. Magnolia Petroleum Company is drilling below 3130 feet in its D. C. Burton 1, NW SE NW Section 30-1s-2w, slightly over a quarter-mile southeast of production and between the Frank Gouin et al producer in Section 31 and the main part of the pool. The Texas Company is still shut down with casing cemented at 2372 feet on top of oil sand encountered at that depth in its Eaves 6, NE SW SW Section 24-1s-3w.

One of the most interesting tests to be started in southern Oklahoma in the past several months is that of Carter Oil Company on its Estella Florence 1, NW NW NE Section 11-3s-6w, about nine miles east and three miles south of the town of Comanche in Stephens County. The test is located on a core drilled structure which has been partly checked by the information revealed in the drilling of several dry holes in the vicinity. George Pace is cleaning out preparatory to drilling deeper in his Bush 7, NW NE SE Section 3-2s-8w. A small show of gas was encountered in broken sands at 1593 to 1629 feet and from solid sand at 1629 to 1637 feet after drilling the plug.

Crane and Rankin are drilling below 3250 feet in hard lime in their Adkins 1, NE NE SE Section 14-1n-9w, wildcat test north of the Oil City pool in the Duncan district of Stephens County. This is the only test of interest at the present time all others having been abandoned or temporarily shut down.

Don Phillips Oil & Gas Company is rigging up rotary tools for its Lyle 1, NE SE SW NE Section 28-2s-2w, approximately midway between the Graham and Ed Cox pools, in northwestern Carter County. This test will prove one of two things: either that the fast dips encountered on the northeast limb of the Graham pool terminate in a deep syncline between the two pools, or that the beds come back up at an exceedingly fast rate after dipping sharply to the northeast off of the Graham structure.

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Tulsa.—Reports that The Texas Company had made location for King 1, SW NE SW Section 31-1n-3w, as given on page 106 of the March 13 issue of THE OIL WEEKLY, are found to be in error. The Texas Company has not made this location and does not contemplate one.

## East Texas Crude Moving in Large Volume by Tank Cars

Henderson, Texas.—As result of completion of additional loading racks and improvements in existing facilities for handling loaded and empty cars, railroad shipments of Rusk and Gregg County crudes have continued to increase; and the latter part of the past week the tank car traffic attained a peak volume of approximately 125,000 barrels for one day. For the whole week the average volume of crude shipped from the two counties was approximately 115,000 barrels daily, including roughly 50,000 barrels daily from the Kilgore pool, a like amount from Joiner field, and about 15,000 barrels daily from the Longview area.

It is estimated that total shipments of crude from these East Texas fields have been around 3,000,000 barrels up to April 1. Although the Joiner and Kilgore fields are at present supplying about equal volumes of rail shipments, the former attained important proportions earlier, and its shipments by rail have been estimated at somewhat over 1,500,000 barrels, while the shipments from Kilgore had been approximately 1,000,000 barrels up to April 1.

## Clearing Skies in the Oil Industry Seen by de B. Daly

St. Louis.—Clearing skies in the oil industry are seen by U. de B. Daly, president of Shell Petroleum Corporation, as a result of the anticipated proration of the East Texas field and in the statements of major companies in respect to reducing oil imports to the United States.

The import reduction program was announced last week in Austin, Texas, at a meeting of the Texas Railroad Commission dealing with proration matters.

Discussing the company's position in subscribing to the restriction of imports, Mr. Daly said:

"Shell Union has perfected arrangements to reduce gasoline imports by 50 per cent. Shell Union is and will continue to be a net exporter of gasoline from the United States. The reduction program has been received with intense satisfaction by the industry and is considered a move of great importance that will have an extremely beneficial effect on the oil situation."

The Shell Union group of companies includes Shell Oil Company, operating on the Pacific Coast; Shell Petroleum Corporation, operating in the Middle West and Texas, and Shell Eastern, operating on the Atlantic Coast.

Explaining Shell Union's policy regarding exports and imports, Mr. Daly pointed out that Shell Union imported no Venezuela crude into the United States, its only crude imports being approximately 2000 barrels daily from Panuco. This crude is imported for the manufacture of certain grades of asphalt in which the use of domestic crudes is not possible.

Continuing, Mr. Daly said:

"While Shell Union itself is not directly concerned in any operations outside the United States, either in Venezuela or elsewhere, I am authorized to state that in February of 1930 Royal Dutch Shell offered to reduce its production in Venezuela prorata to any general reduction of crude in the United States for 1930 as compared to 1929, provided that the other companies operating in Venezuela would agree to a similar restriction. This offer was not accepted at the time, but has been repeated since, and I understand Royal Dutch Shell is still ready to restrict 1931 production on some similar basis."

Mr. Daly believes, that given a chance, proration will eventually stabilize the oil industry. On this subject he points out that major companies subscribing to proration actually suffer more from the restriction than smaller producers.

"In observing the proration agreement," declared Mr. Daly, "Shell Petroleum Corporation is forced to buy nearly 60 per cent of its crude oil requirements although its own production, now restricted, would more than fill its needs. This puts us in the position of having an abundance of oil of our own, which we cannot use, at the same time compelling us to buy oil in the market. Besides, we must keep up lease payments on oil lands on which production has been shut down or restricted."

## Refinery Runs and Gasoline Stocks About Normal

Runs of crude to stills last week, on a Bureau of Mines basis, averaged 2,402,000 barrels daily. This was a gain over the preceding week of 36,000 barrels and is believed to represent a level that is not excessive in view of the demand for gasoline. Stocks of gasoline as of March 28 aggregated 47,444,000 barrels, a gain over the preceding week of 686,000 barrels.

A study of the gasoline stock situation made by H. J. Struth, and presented in a paper on gasoline economics before the Petroleum Division of the American Institute of Mining and Metallurgical Engineers in New York last month carried a statement that is of particular significance at this time. He stated that on the assumption that an approximate normal gasoline stock per motor vehicle constitutes a ratio of 1.2, stock to consumption, the mean average stock of gasoline during 1931 should be about 40,000,000 barrels. He concluded that in conformity with the indicated seasonal demand this indicates a minimum stock, following the season of peak demand, of 34,000,000 barrels, and a maximum, as of about April 1, of 47,000,000 barrels. Since actual stocks as of March 28 amounted to slightly more than 47,000,000 barrels, it is seen that this figure is about normal and should constitute the maximum reserve for this year.

According to the foregoing conclusion, it is up to refiners to exercise no little caution in maintaining still runs on a schedule that conforms with the indicated demand for gasoline during the months ahead. From now on, still run schedules should be maintained at or near present levels, at least through April and May, in order that normal increased demand for gasoline will effect an expected reduction in gasoline stocks. If runs are maintained at this level throughout April and May, there is every reason to believe that gasoline stocks as of September 1 will have shown a decline to the prescribed minimum of 34,000,000 barrels. At present levels of refinery operations,* the industry should experience a decline in gasoline stocks over the next two months of at least 2,000,000 barrels, bringing the stock figure down to about 45,000,000 barrels as of June 1. During June, the normal gasoline stock reduction contemplates a further reductiton of 2,000,000 barrels, while in July and August the monthly withdrawal from stocks will probably amount to 3,000,000 barrels. In all, from now until October 1, there should be a total withdrawal of gasoline from storage of about 12,000,000 barrels.

* Details of projected refinery runs and course of gasoline stocks for 1931 appeared in the January 30, 1931, issue of The Oil Weekly, page 55.

# ▼ NEW MEXICO - ROCKY MOUNTAIN AREA ▼

## Eunice, Lea County Operators To Restrict Output of Field

Hobbs, New Mexico.—Operators in the Eunice field, Lea County, propose to restrict the output of the field to 50 barrels daily per well because of the absence of a crude purchaser in the field, which is served only by The Texas Pipe Line Company. The latter functions only as a common carrier, and has a tariff of 12½ cents per barrel in delivering the oil to the nearest connection with other pipe lines and railroad at Wink, Texas. Production was cut from about 3000 barrels to 1500 barrels daily effective February 20, and further pinching of wells is to follow with the withdrawal of the Tidal Refining Company as a buyer April 1. The latter moved the oil to the Gulf Coast on a common carrier basis.

An informal meeting of producers and owners of nearby leases was held in Fort Worth March 26, and unanimous approval was given the plan to cut all wells to 50 barrels daily, and shut in those near producers that are unable to move oil from the field. One well each held by Continental Oil Company and The California Company, joint operators, Tidal Oil Company, Shell Petroleum Corporation and Atlantic Oil Producing Company in the upper section of the field will go on the 50-barrel basis, while the former's two producers on the lower end will likely be shut in because of the Geo. F. Getty Oil Company losing its connection with Tidal Refining Company.

The California Company's State-Meredith 1, located south of the Getty Oil Company's well, was tested late last week in medium-hard gray lime at 3930 feet, and proved good for about 300 barrels oil and 15,000,000 cubic feet of gas daily, flowing between three-inch drill pipe and seven-inch casing, which was cemented at 3700 feet. Upon completion this new producer will be shut in, providing New Mexico officials sanction the curtailment plans. Endorsement has already been given by local representatives of the U. S. government, which also has royalty interests in the field.

Midwest Refining Company is starting its first test in the Hobbs field in more than a month, having set up rotary to drill W. S. Capps 26, located 660 feet from the south and 1980 feet from the west lines of Section 3-19s-38e.

## Plan 10,000-Foot Test of Rangely, Colorado, Structure

Craig, Colo.—The California Company engineers and field superintendents are at Rangely structure spotting location for the deep test which the company is to carry to 10,000 feet if necessary in order to test the possibilities of the Weber sandstone of the Pennsylvanian series, Carboniferous age. Test is to be known as California-Redan 1, and will be on NW SE 30-2n-102, Rio Blanco County.

Equipment for the test is new to Colorado operators. Rig is a combination rotary of the latest type, 138 feet high, powered by a Diesel-electric unit, the first to be used in the Rocky Mountain States. Trucking contract for the test is probably the largest of its kind in this territory. Estimated weight in all is 750,000 pounds.

The Dakota, Morrison and Sundance sands have already been tested in the Rangely field. Good gas production has been developed, and shallow wells produce small quantities of high gravity crude.

The California-Redan 1 is a joint test of Texas Production Company, Tidewater Associated Oil Company and The California Company. Others holding acreage on the structure are Associated Oil Company, Raven Oil & Refining Company and A. C. McLaughlin.

## Big Muddy Field Deep Test Makes 400-Barrel Producer

Casper, Wyo.—Ohio Oil Company's deep test now bottomed in the Lakota sand, in the Big Muddy field, east of Casper, swabbed 400 barrels in 24 hours on its initial test, and is now being drilled deeper into the sand from an original total depth of 4357 feet. Oil has a gravity of 32 degrees.

Importance of the discovery lies chiefly in its bearing upon other wells in the field which will probably be drilled deeper in the future to tap the pay in the Lakota which has hitherto been unproved. Last year Continental Oil Company drilled one of its wells to the Dakota sand, lying above the Lakota, and when production was not found, shut the test down. This well will perhaps be the next one deepened in the field. Big Muddy is one of the oldest and most consistent producers among Wyoming oil fields.

## Osage Field Operators Set $1.05 Per Barrel Crude Rate

Osage, Wyo.—The operators of the Osage field have announced that their established field price for Osage crude is $1.05 per barrel. Midwest Refining Company's price posted at the wells is 85 cents per barrel, but in view of the fact that most of the oil is contracted, the posted field price is a matter of little importance. Oil & Gas Producers Association of the field made the announcement, stating that the $1.05 per barrel was the minimum at which each producer in the field had agreed to sell his product.

Osage Trust Company has contracted to deliver 100,000 barrels of Osage crude (very high gravity) to Montana refineries at $1.05 per barrel. The oil is to be used to mix with heavier grades.

The program of eight wells for the field is announced by Paymac Oil Company, which is financed by the state of Wyoming. First well is to be started in April.

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Farmington, N. M.—Deep test to the Pennsylvanian series now being drilled by Continental Oil Company on Rattlesnake dome, San Juan County, Northwestern New Mexico, has been held up for two months or more with rotary drill pipe stuck in the hole bottomed at 4730 feet. Test is now cemented to 3300 feet, and an attempt is to be made to drill by. The company's first test to the Pennsylvanian on this structure found 750 barrels initial production.

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Mosquero, N. M.—Kummbaca Oil & Gas Company's Kerline 1, in Harding County, in the Ute Creek Buttes, is attracting interest. Test is standing at 287 feet with 20-inch cemented on top of a showing of non-inflammable gas in red sand. Estimate placed the production at 500,000 to 1,000,000 cubic feet. Pressure is held down by 150 feet of water run into the hole. The gas has a sharp odor like ammonia.

# East Central Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

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## Potential of New East Texas Fields Above 500,000 Barrels

Tyler, Texas.—Open-flow production capacity of the 100 completed oil wells in Rusk-Gregg and Smith Counties, comprising the new East Texas area, has passed the 500,000-barrel mark. Enlargement of the potential production of the distirct is to reach spectacular proportions during the next 90 days, as there are 385 operations in Rusk and Gregg Counties to be added to completion reports during this period, while only a small percentage is situated outside the proven oil territory. There are 222 active tests on current field reports, with 141 other operations progressing from the derrick to the rigging up stage, and 22 locations. It is of more than passing interest to note that apparently the most prolific sections of the Joiner and Longview fields are just being uncovered to the west of the previous scene of drilling activity in each area.

The Kilgore, or mid-field, is setting the pace on potential, actual production and new field work, with activity centering on both sides of the Rusk-Gregg County line, and following a trend toward the Joiner and Longview fields. There are no indications that a barren stretch of territory exists along the 30-mile path, lying west of the so-called shoreline, which is being accurately located by the completion of nine failures immediately east of the production trend. These failures passed into the Georgetown lime without encountering Woodbine sand, or else found insufficient sand to afford commercial oil producers. Until proven otherwise the Georgetown lime horizon is being accepted as the deadline on production depths in the district.

Production in the Kilgore field was 55,395 barrels daily at the close of last week, exclusive of oil produced by Magnolia Petroleum Company's four big producers that were being tied into the company's trunk line system. The above oil yield was contributed by only 17 of the 26 completions in the field, and during the same period there were five wells shut in for lack of storage or pipe line connections. These 26 completions are credited with a combined potential of 346,750 barrels daily. There are 17 additional tests on top of the Woodbine sand horizon in the Kilgore field proper.

Humble Oil & Refining Company continues to lead all operators in the district in production and tank car shipments, having contributed 24,425 barrels to the above daily output, and such a volume has been maintained during the past several weeks. Although more than one month has elapsed since Humble Pipe Line Company partially completed its eight-inch trunk line connection to the Kilgore field, the company has refused to wind up the job, which can be completed within a few days. Heavy tank car shipments by this company displaces a like amount of shipping facilities for other operators in the Kilgore and Joiner fields, owing to the I.&G.N. Railroad being taxed to capacity in handling the traffic on inbound and outbound freight for the two fields, which are directly served only by this rail line. However, Humble Oil & Refining Company has directed its heavy oil drainage away from wells of other operators in the field that have been unable to obtain transportation and market relief. Houston Oil Company is shipping about 14,500 barrels daily over its rack in the Kilgore field, and will shortly be in a position to enlarge this outlet through having built a line to the Cotton Belt Railroad at Amigo, Smith County, where a tank farm and car rack has been established.

Longview field, Gregg County, had nine wells on production at the close of last week, with a combined output of 23,780 barrels. All wells were pinched considerably below their potential output, which is rated at 102,000 barrels daily. Arkansas Fuel Oil Company and the Yount-Lee Oil Company, joint operators on the discovery lease, contributed 16,575 barrels to the above production quota from four wells. The remainder of the production was distributed among five companies, and was being handled by the East Texas Refining Company, or else going to field storage. Simms Oil Company, Shell Petroleum Corporation and Independent Pipe Line Company are to begin operating lines from this field to racks on the Texas & Pacific Railroad late this week, while Magnolia Pipe Line Company is completing work on its combination six- and eight-inch extension from its 10-inch trunk line system.

## Longview Field's Maximum Width is About Six Miles

Longview, Texas.—A maximum width of more than six miles in an east and west direction is in store for the Longview field as result of Selby Oil & Gas Company's wildcat test on the P. J. Snavely 214-acre tract, Wm. Tynedale Survey, near Gladwater, having cored two separate oil saturated sand horizons that correlate closely with the nearest wells in both the Longview and Kilgore fields. This western Gregg County test logged first sand at 3528-34 feet followed by a layer of red shale at 3534-72 feet, then a richly oil saturated core was recovered in sand formation at 3572-83 feet. Casing has been cemented on top of the cap rock overlying the first sand. An excellent producer is assured this Tulsa concern, based on the recovered cores.

Production in the Longview field proper advanced more than 1½ miles to the northeast when E. E. Eslick and Little's Spring Hill Church Lot 1, Dolores Sanches Survey, tested 203 barrels oil first hour from oil sand, with a gravel break and some saturated lime at 3597-3623 feet. Eslick is reported to have obtained lease on 15 acres from the church congregation last January, paying $50,000 from one-fourth of the first oil produced, then sold a half interest in the project to Little et al for $7500 cash. This completion has been followed by the starting of a number of nearby tests. Mrs. Mamie Hammonds et al's Hamby 1, located further northeast, is drilling in Georgetown lime below 3730 feet after topping same at 3685 feet, and is rated as a failure.

Proximity of the Longview field discovery well to the east edge of the field was illustrated early this week when Tidal Oil Company's F. K. Lathrop 1 encountered only a thin layer of oil sand at 3603 feet, with sandy lime and shale continuing to 3636 feet. Recovery was not obtained on all

coring, and it is possible that some additional sand was passed up before solid shale was cored at 3627-36 feet. This test is only a short distance east of excellent producers on the Tenery farm, and will likely make a small producer.

Simms Oil Company and Stanolind Oil & Gas Company's Tenery 1 blewout at the 3590-foot level while retrieving a core, and flowed wild for a few hours on the morning of March 29. It has since been mudded in, and casing will be set and cemented.

## Give Latest Van Completion Three-Hour Proration Test

Tyler, Texas.—Geo. S. Anderson and E. E. Fogelson's Sanger Bros. 2, located on a strip lease in the east edge of the Van field, flowed 209 barrels oil during first three-hour proration test through 11/16-inch choke from Woodbine sand at 2820-34 feet, with broken sand and shale at 2834-53 feet. This well is an offset to a failure recently drilled to 2990 feet on the Frank Blackstock farm, and logged Pecan chalk at 1625-1734 feet and Austin chalk at 2495-2672 feet, with a surface elevation of 503 feet. It is located outside the unit block.

Development work in the Van field is being held to a minimum, with only nine rigs operating. The output of the field advances from 35,000 to 40,000 barrels daily effective April 1 as result of previous authorization given by the Texas Railroad Commission.

## Two Completions Extend Kilgore Field North Into Gregg County

Tyler, Texas.—Two heavy producers extended the Kilgore field to the north and across in Gregg County during the past week, thus adding weight to the theory that a wide open path is awaiting the drill to form a connecting link with the Longview field. Magnolia Petroleum Company's Ben Laird 1 tested 426 barrels oil during first 20 minutes from regular Woodbine sand at 3574-87 feet, but had to be throttled because of limited tankage and absence of a connection with the company's trunk line system in the lower end of the field. Hunter-Rowe and others' J. B. Watson 1, located to the east and in the southeast part of the J. S. Carruthers Survey, earned an initial rating of 15,000 barrels daily after drilling sand at 3598-3637 feet, with cleanest sand at 3614-37 feet.

Maximum thickness of the Woodbine series is being sought by Humble Oil & Refining Company in making a deep test of its L. D. Crim 10, located in the southeast corner of the E. G. Sevier Survey, and early this week was coring below 3750 feet. Crim 10 logged first sand at 3691 feet, and encountered red and blue shale formation near the 3736--foot level. This deep test will also probably determine if bottom hole water is to be encountered in drilling through the sand series, as no producing wells in the district have developed water troubles in any form, although exceeding hot oil prevails in the Kilgore and Longview fields, as if though salt water may be close at hand. Wells exposed to any appreciable volume of drainage soon offer a constant temperature, ranging from 110 to 138 degrees, but in the Joiner field hot oil is a rarity. In the Van field and all fields in the Corsicana-Mexia district a rise in temperature on the flow line from a well is an unfailing warning that water troubles are approaching.

A new record for oil sand thickness in the Kilgore field was chalked up during the past week when Humble Oil & Refining Company's Peterson 2 logged about 58 feet of net sand, which was topped at 3670 feet, with total depth 3770 feet. This well gauged 377 barrels oil during first hour, and 11,000 barrels during the first 18 hours, partly choked. The gas production was at rate of 4,760,000 cubic feet daily.

Kilgore townsite is now considered certain to lie within the proven oil area, W. L. Brandon-Geo. B. McCamey et al's Richards 1, located east of the town, barely missed developing a commercial producer after drilling through thin layers of sand into Georgetown at 3563-74 feet. Casing was set and cemented to permit a swabbing test, which proved disappointing, so the hole was ordered abandoned. J. R. Travis-Holloway et al's A. G. Morton 1, McCurry Survey, located further to the northeast, also found the sand missing after drilling into Georgetown at 3533-61 feet, and will be given up as a failure. In the same area, D. H. Byrd-Gulf Production Company et al's Elder 1 is being carried to 4000 feet to complete contract, and validate leases after encountering Georgetown at 3566 feet. These same interests issued contract last week to R. H. Dearing & Sons, Dallas contractors, to proceed with the drilling of a location on the Camorras farm, Hayden Edwards Survey, located further east from the possible oil zone.

## Two More Tests in Harrison County, Texas, Prove Failures

Shreveport.—Two more tests missed the Woodbine sand and went into the Georgetown in Harrison County, Texas, during the week ending March 29, but a play for the Woodbine shore line east of Gregg County, apparently continues with hope as three new locations were announced during the week in Harrison County and one in Marion County.

W. H. Hobson, Trustee's, Taylor 1, Henry Vardeman Survey, Harrison County, with elevation of 284 feet, shut down in Georgetown lime at total depth of 3520 feet and probably will be abandoned there. The Georgetown formation was topped at 2865 feet.

W. G. Ray Drilling Company's Hall 1, Daniel Davis Survey, also in Harrison County, four miles northwest of the town of Hallsville, topped the Georgetown at 3471 feet late last week but was still drilling ahead later, contract depth being 3750 feet. Sinclair Oil & Gas Company owns an interest in this test and 1500 acres of leases surrouding it.

The new Harrison locations made during the week include Banner and associates' Lowry 1, W. O. Stanfield Survey, where rigging up was under way late last week. This location is four miles southwest of Hallsville. George L. Pace was also rigging up for Barker 1, Victor Pedraso Survey. Ryan Consolidated Petroleum Corporation made location for H. H. Key 1, S. Carroll Survey, 12 miles south of Marshall, the county seat of Harrison County, the first definite location staked in the southern part of that county. It is on a 10,000-acre block.

Sinclair Oil & Gas Company made its third location in Marion County during the week in D. R. Coulter 1, William Russell Survey, in the northwest part of the county. This company is said to be negotiating for purchase of 5000 acres lying southwest of this location. J. B. Baker, Jr., of Wichita Falls has taken over a 5000-acre block four miles north of Jefferson, paying $2 per acre, for a 4000-foot test.

Shelby County secured two new locations during the week, Sloane Prospecting Company's Windham 1, A. H. English Survey, where derrick pattern was run, and Mauldin and associates' Frost Lumber Industries 1, A. B. Fountain Survey, a location 12 miles southwest of Center, the county seat. A 4000-foot test is planned.

# Field Operations in New East Texas Area

Field operations in new East Texas area—compiled by The Oil Weekly as of March 30, 1931.

## RUSK COUNTY OPERATIONS

| Operator— | Lcns. | Derricks & Rigs | Active Tests | Total |
|---|---|---|---|---|
| Geo. S. Anderson & Cox | | 1 | 1 | 2 |
| W. D. "Andy" Anderson et al | | 1 | 1 | 2 |
| C. Andrade—Imperator Oil Corporation | | 1 | . | 1 |
| Armstrong & Pitts | | 1 | . | 1 |
| Babcock-Gordon Oil Co. | 1 | . | 1 | 2 |
| Ball Oil Corp. & Malone | | . | 1 | 1 |
| Nick Barbare (UOG&M Co.) | 1 | . | 1 | 2 |
| Ed. W. Bateman et al | | 1 | . | 1 |
| Beard & Hammond | | 1 | . | 1 |
| Bill & Dave Oil Corporation | | . | 1 | 1 |
| Big Indian Oil & Dev. Co. | | . | 1 | 1 |
| H. L. Blackstock et al | | 1 | 2 | 3 |
| Harry W. Bleam et al | | 1 | . | 1 |
| British-American Oil Co. | | 1 | . | 1 |
| Dan Brooks, Trustee, et al | | . | 1 | 1 |
| H. L. Brown—Hill et al | | . | 1 | 1 |
| Burton Drlg. Co. (Sabine Synd.) | | 1 | 1 | 1 |
| Garolyn Oil Corpn. | 1 | . | . | 1 |
| Roy I. Carter (C. P. Oil Co.) | 2 | 1 | 2 | 5 |
| E. L. Chapman et al | | . | 1 | 1 |
| Clark & Cowden | | . | 1 | 1 |
| Cordova Union Oil Corp. et al | | 2 | 3 | 5 |
| Crabtree-Rowe-Johnson | | . | 1 | 1 |
| Cranfill-Reynolds Co. | | 1 | 4 | 5 |
| J. G. Curtis & Lowe | | . | 1 | 1 |
| Danciger Oil & Ref. Co. | 1 | . | . | 1 |
| Daniel & Tom C. Patten | | . | 1 | 1 |
| Deep Rock-Wainwright-West Oils, Ltd. | | . | 1 | 1 |
| Geo. DeMontrand-Geo. B. Ray | 1 | . | . | 1 |
| Devonian Oil Co.—Gulf Prod. Co. | | . | 1 | 1 |
| Dan Dillon et al | | 1 | . | 1 |
| Dohman et al | | . | 1 | 1 |
| W. H. Dunning—C. P. Link —Markham | | . | 3 | 3 |
| East Texas Ref. Co. | 1 | 1 | . | 2 |
| Harry W. Elliott et al | | 1 | . | 1 |
| Elzey Drl. Co. & C. H. Tautenhahn | | 1 | 1 | 2 |
| Geo. Fagg et al | | . | 1 | 1 |
| Federated Oil Co. | 2 | 3 | 2 | 7 |
| Fitzsimmons et al | 1 | . | . | 1 |
| Frank Foster—Deep Rock et al | | . | 4 | 4 |
| Foster-Jefferies & Kolp | | . | 1 | 1 |
| Foster-Little et al | | . | 2 | 2 |
| Fox-Butler & Heflin | | . | 1 | 1 |
| Gibson-Johnson & Merrick Drl. Co. | | . | 1 | 1 |
| Gilcrease Oil Co. | | . | 1 | 1 |
| R. W. Giles (Shreveport Prod. Co.) | | 1 | 1 | 1 |
| A. M. Griffith et al | | . | 1 | 1 |
| Gulf Production Co. | | 2 | 4 | 6 |
| Gulf Prod. Co.—Devonian Oil Co. | | 1 | . | 1 |
| W. B. Hamilton-Consolidated Oil Co. | | . | 7 | 7 |
| L. P. "Pink" Hammond et al | | 1 | . | 1 |
| Haynes Drilling Co. | | . | 1 | 1 |
| Heep Oil Co. | | . | 1 | 1 |
| Heep Oil Corp. & Imperator Oil Corp. | | 1 | . | 1 |
| Hicks Drilling Co. | | . | 1 | 1 |
| Hill & Jack Younger | | 1 | . | 1 |
| Horseshoe Synd (was W. B. Pierce) | | . | 1 | 1 |
| Humble Oil & Refg. Co. | 2 | 8 | 13 | 23 |
| Houston Oil Co. | | 4 | 3 | 7 |
| H. L. Hunt et al | 1 | . | 3 | 4 |
| H. L. Hunt & Graddy H. Vaughn | | . | 2 | 2 |
| A. R. Irwin et al | | . | 1 | 1 |
| Johnson et al | | . | 1 | 1 |
| C. M. Joiner (E. R. Tennant, Rec.) | | . | 4 | 4 |
| Ed. M. Jones et al | | 1 | . | 1 |
| Ed. M. Jones—Houston Oil Co. | | 2 | 2 | 4 |
| Jones Drl. Co. | | . | 1 | 1 |
| K. & M. Oil Co. | | 2 | 1 | 3 |
| Karona Oil Co., (Heard) | | 2 | 1 | 3 |
| J. S. Kimbrough et al | | . | 1 | . | 1 |
| LaSalle & Davenport | | . | 1 | . | 1 |
| Killum & Reed | | . | 1 | . | 1 |
| Laster Oil Co. | | . | . | 1 | 1 |
| Laster Oil Co. & Deep Rock | | . | . | 2 | 2 |
| Laster Oil Co. & Miller | | . | 1 | . | 1 |
| Louisiana-Texas Oil Corp. & Lyons | | . | . | 1 | 1 |
| Leonard Pet. Co. | | . | . | 2 | 2 |
| Lewis Prod. Co. | | . | . | 1 | 1 |
| Lewis Prod. Co. & Selby O&G Co. | | . | 2 | . | 2 |
| Lide-Taylor Oil Co. | | . | . | 1 | 1 |
| Lide-Rowe Oil Co. | | . | . | 1 | 1 |
| Lively & Bryan | | . | . | 1 | 1 |
| Pete Lively et al | | . | . | 1 | 1 |
| Luling Oil & Gas Co. | | . | . | 1 | 1 |
| Madden et al | | . | . | 1 | 1 |
| Magnolia Pet. Co. | | . | 3 | 5 | 8 |
| Marine Corp. et al | | . | . | 2 | 2 |
| Chas McDonald-Merrick Drl. Co. | | . | . | 1 | 1 |
| C. L. McMahon et al | | . | 3 | . | 3 |
| McMann et al | | . | . | 1 | 1 |
| McIntyre Drilling Co. | | . | . | 1 | 1 |
| McMillan et al | | . | . | 2 | 2 |
| Merrick Drilling Co. et al | | . | . | 1 | 1 |
| Mid-Kansas Oil & Gas Co. | | . | 1 | 1 | 2 |
| Morefield Drlg. Co. & Head | | . | . | 1 | 1 |
| H. S. Moss & Pete Urschel | | . | . | 1 | 1 |
| Moss et al | | . | . | 1 | 1 |
| Navarro Oil Co. | | . | . | 1 | 1 |
| H. E. Oliver & F. H. Brown | | . | 1 | . | 1 |
| Olson Bros. et al | | . | . | 3 | 3 |
| John W. Olvey & Sample | | . | . | 1 | 1 |
| Pearl Oil Co. (Vitek) | | . | 1 | 1 | 2 |
| Peery-Woody & C. W. Boller | | . | 1 | 3 | 4 |
| Petroleum Marketing Corp. | | . | 1 | 2 | 3 |
| A. W. Phillips-Trico Oil Co. | | 1 | 2 | 1 | 4 |
| Pilot Oil Co. (Tom E. Cranfill) | | . | 4 | 5 | 9 |
| Pioneer Oil Co. (Moody-Seagraves) | | . | 4 | 5 | 9 |
| Jim Pollard et al | | 1 | . | . | 1 |
| C. W. Porter et al | | . | 1 | 2 | 1 |
| Republic Prod. Co.—Louis Hart | | . | . | 1 | 1 |
| Reserve Oil Co. | | 1 | . | . | 1 |
| Robert Oil Corp. et al | | . | . | 1 | 1 |
| Robertson Drilling Co. | | . | . | 1 | 1 |
| J. S. Rushing et al | | . | 1 | . | 1 |
| Rusk County Oil Co. | | . | 1 | . | 1 |
| Nat Sadler et al | | . | . | 1 | 1 |
| Shasta Oil Co. | | . | . | 1 | 1 |
| T. G. Shaw Interests | | . | 1 | . | 1 |
| Bert J. Shaw Oil Co. et al | | . | . | 2 | 2 |
| Shell Pet. Corp. | | . | 1 | . | 1 |
| Shubert et al | | . | 1 | . | 1 |
| Sinclair O&G Co. | | . | . | 5 | 5 |
| H. R. Smith-Gulf Prod. Co. | | . | . | 2 | 2 |
| Snetcher & Pittman | | . | . | 1 | 1 |
| Stanolind Oil & Gas Co. | | . | 2 | 2 | 4 |
| H. R. Smith-Houston Oil Co. | | . | . | 2 | 2 |
| Stokes et al | | . | 1 | . | 1 |
| Snowden & McSweeney Co. | | . | . | 2 | 2 |
| Sun Oil Co. | | 1 | 2 | . | 3 |
| Texas Inland O&G (G. W. Basom) | | . | . | 1 | 1 |
| Tidal Oil Co. | | . | 4 | 1 | 5 |
| Tidal Oil Co.-Wm. Johnson | | . | . | 1 | 1 |
| Texas Unity Oil Co. | | 3 | . | . | 3 |
| Turman Oil Co. | | . | 3 | 2 | 5 |
| C. E. Upchurch et al | | . | 1 | 2 | 3 |
| W. D. Walton et al | | . | . | 1 | 1 |
| Ward Oil Corp. | | . | 2 | 1 | 3 |
| Ward Oil Corp.-Elliott-Johnston | | . | . | 2 | 2 |
| Weaver-Crim Corp. | | . | 1 | 1 | 2 |
| Westexas Oil & Roy Corp. | | . | 1 | . | 1 |
| Westheimer-Daube-Cox & Hamon | | . | 2 | 1 | 3 |
| Williams & W. H. Dunning | | . | 1 | 1 | 1 |
| Witherspoon Oil Co. | | . | . | 1 | 1 |
| Woodley Petroleum Co. | | . | 3 | 2 | 5 |
| Total | | | 20 | 99 | 180 | 299 |
| Total previous week | | | 23 | 96 | 161 | 280 |

## GREGG COUNTY OPERATIONS

| Operator— | Lcns. | Derricks & Rigs | Active Tests | Total |
|---|---|---|---|---|
| Alco Oil Corpn. | | . | 1 | 1 |
| Jule Alford et al | | 1 | . | 1 |
| W. M. Angle & Brytex Oil Co. | | 1 | . | 1 |
| Arkansas Fuel Oil Co. | 1 | . | 2 | 3 |
| Arkansas-Yount-Lee Oil Co. | | 1 | 2 | 3 |
| Barkley & Lincoln | | 1 | . | 1 |
| Blackwell Oil Co. | | 1 | . | 1 |
| Claude Bell & R. A. Graddy, Inc | | . | 1 | 1 |
| D. H. Byrd-Gulf-Humble et al | | 1 | 1 | 2 |
| Cranfill-Reynolds Co. | | 2 | 1 | 3 |
| Crump & Hanagan | | 1 | . | 1 |
| Daisy Oil & Gas Co. | | 1 | . | 1 |
| Davis & Russell | | . | 1 | 1 |
| Daniel & Tom C. Patten | | . | 2 | 2 |
| Tom David (was Leonard Pet. Co.) | | 1 | . | 1 |
| Joe DeGlazier et al | | 1 | . | 1 |
| Harry W. Elliott et al | | . | 1 | 1 |
| E. E. Eslick & Little | | . | 1 | 1 |
| Flannigan Prod. Co. | | 1 | . | 1 |
| Frank Foster-East Texas Refining Co. | | . | 1 | 1 |
| Frank Foster & Rhodes | | 1 | . | 1 |
| Gibson & Adams | | 1 | . | 1 |
| Mamie Hammonds-Clark et al | | . | 1 | 1 |
| Heep Oil Corp. | | . | 1 | 1 |
| Herden & Woodard | | 1 | . | 1 |
| Ed. B. Hopkins & A. R. Byrd, Jr. | | . | 1 | 1 |
| Pat Hudson & Geo. B. McCamey | | 1 | . | 1 |
| W. D. Humphrey et al | | . | 1 | 1 |
| Humble Oil & Ref. Co. | | 1 | . | 1 |
| S. F. Hurlburt & Brown | | . | 1 | 1 |
| Hunter-Rowe et al | | 1 | . | 1 |
| Kilgore Central Oil Co. | | 1 | . | 1 |
| Lacey et al | | . | 1 | 1 |
| Marlan Oil Synd. | | 1 | . | 1 |
| Mid-Kansas O&G Co. | | 3 | . | 3 |
| Magnolia Petroleum Co. | | 2 | 3 | 5 |
| McMillan Pet. Co. | | 1 | . | 1 |
| Moss et al | | 1 | . | 1 |
| John W. Olvey et al | | 1 | . | 1 |
| Oriental Oil Co. | | 1 | . | 1 |
| Phares & Sample | | 1 | . | 1 |
| Primrose Ref. Co.-Penn-Worth Oil Prod. Co. | | 1 | . | 1 |
| Pilot Oil Co. | | 1 | 1 | 1 |
| Republic Prod. Co. | | . | 1 | 1 |
| C. Rosenfield (Rose Oil Corp) | | . | 1 | 1 |
| Roeser-Pendleton, Inc. et al | | . | 1 | 1 |
| Robert et al | | 1 | . | 1 |
| Jim Rush-Simms-Hubbard | | . | 1 | 1 |
| Selby Oil & Gas Co. | | . | 1 | 1 |
| Shell Petroleum Corpn. | | 1 | 1 | 2 |
| Skipper Oil Co. | | . | 2 | 2 |
| Smith et al | | 1 | . | 1 |
| Stanolind O&G Co.-Simms Oil Co. | | . | 1 | 1 |
| Sultan Oil Co. | | . | 1 | 1 |
| Sutton et al | | 1 | . | 1 |
| Tidal Oil Co. | | . | 1 | 1 |
| Tidal-Jim Evans & J. K. Wadley | | . | 1 | 1 |
| J. R. Travis (was Holloway-Hardin) | | . | 1 | 1 |
| Paul Vitek et al | | . | 1 | 1 |
| W. L. Wallett (was F. D. Prince) | | . | 1 | 1 |
| J. A. Weir et al | | 1 | . | 1 |
| J. Z. Werby & McMinn et al | | . | 1 | 1 |
| Winona Oil Co., et al | | 1 | . | 1 |
| Wise & Jackson | 1 | . | . | 1 |
| Ben Youngblood et al | | . | 1 | 1 |
| Yount-Lee Oil Co. | | 4 | . | 4 |
| Total | 2 | 42 | 42 | 86 |
| Total previous week | 4 | 40 | 33 | 77 |
| Total both counties | 22 | 141 | 222 | 385 |
| Total previous week both counties | 27 | 136 | 194 | 357 |

# Rusk-Gregg County Producers—Kilgore Field

| | Elev. | Pecan Chalk | Austin Chalk | Producing Horizon | Total Depth | Date Comp. | Initial Prod. | Current Production or status |
|---|---|---|---|---|---|---|---|---|
| H. L. Blackstock et al's W. P. Brightwell 1 | 371 | 2600-3070 | ....-.... | 3672-.... | 3690 | | | Coring sand |
| W. P. Brightwell 2 | 341 | 2660-3100 | ....-.... | ....-.... | 3635 | | | Cem cas 3590 ft. |
| Burton Drlg. Co.-Sabine Synd.'s E. B. S. Florey 1 | 354 | 2650-3070 | 3540-.... | 3710-3729 | 3729 | 3-15-31 | 10,000 | Shut in |
| Geo. Thompson 1 | 437 | 2600-2986 | 3445-3612 | 3621-3660 | 3705 | 3-23-31 | 7,500 | Shut in |
| W. L. Brandon-McCamey et al's J. F. Richards 1 | 339 | 2541-2927 | 3428-.... | ....-3574 | 3574 | 3-27-31 | | D&A (top Georgetown 3562 ft.) |
| D. H. Byrd-Gulf Prod. Co. et al's Frank Elder 1 | 341 | 2418-2920 | 3374-3439 | ....-.... | 3956 | | | Drilling (top Georgetown 3566 ft.) |
| Cordova Union Oil Corp. et al's C. O. Christian 1 | 442 | 2632-3057 | 3521-3600 | 3679-3705 | 3705 | 3- 4-31 | 10,000 | *4870 |
| W. H. Dunning-C. P. Link-Markham's J. N. Peterson 1 | ... | 2636-3109 | 3468-3590 | 3654-.... | 3680 | | | Coring sand |
| Federated Oil Co.'s B. F. Laird 1 | 400 | 2607-3013 | 3480-.... | 3624-3654 | 3654 | 3- 1-31 | 10,000 | Shut in |
| Heep Oil Corp.'s J. E. Bean 1 | 405 | 2568-3020 | 3460-.... | 3638-.... | 3647 | | | Bldg. storage |
| Humble O&R Co.'s L. D. Crim 1 | 403 | 2608-3014 | 3480-3552 | 3640-3652 | 3652 | 12-28-31 | 15,000 | Shut in |
| L. D. Crim 2 | 487 | 2610-3090 | 3500-.... | 3699-3724 | 3724 | 2-27-31 | 12,000 | |
| L. C. Crim 3 | 466 | 2615-3067 | 3545-.... | 3690-3720 | 3720 | 3- 5-31 | 12,000 | |
| L. D. Crim 4 | 450 | 2650-3070 | 3497-3629 | 3672-3708 | 3708 | 3-11-31 | 12,000 | |
| L. D. Crim 5 | 433 | 2682-3109 | 3496-.... | 3661-3690 | 3690 | 3-15-31 | 10,000 | |
| L. D. Crim 8 | 387 | 2535-.... | ....-.... | 3640-3694 | 3694 | | | Completing |
| L. D. Crim 9 | 457 | 2610-.... | 3495-3609 | 3683-3725 | 3725 | 3-22-31 | 15,000 | *13,950 |
| L. D. Crim 10 | 463 | 2661-.... | 3526-.... | 3691-.... | 3745 | | | Making deep test |
| Ben Laird 1 | 403 | 2631-3062 | 3452-.... | 3605-3647 | 3647 | 3- 9-31 | 10,000 | *200 |
| S. S. Laird 2 | 447 | 2595-.... | ....-.... | 3630-.... | 3710 | | | Coring sand |
| J. N. Peterson 1-A | 397 | 2632-3060 | 3475-3575 | 3616-3656 | 3656 | 3-10-31 | 15,000 | *200 |
| J. N. Peterson 2-A | 467 | 2608-3045 | 3538-.... | 3670-3770 | 3770 | 3-25-31 | 20,000 | *10,075 |
| J. N. Peterson 4-A | 445 | 2647-3030 | 3492-.... | 3655-3760 | 3760 | 3-27-31 | 15,000 | |
| Hunter-Rowe et al's J. R. Watson 1 | ... | 2545-2972 | 3467-.... | 3598-3637 | 3637 | 3-24-31 | 15,000 | Shut in |
| Ed. M. Jones-Houston Oil Co.'s J. M. Crim 1-B | 455 | 2606-3050 | 3550-.... | 3666-3693 | 3695 | 3-18-31 | 10,000 | *2120 |
| W. R. Crim (10-ac) 1 | 440 | 2631-3060 | 3540-3601 | 3675-3695 | 3695 | 2-20-31 | 15,000 | *12,375 |
| W. R. Crim (10-ac) 2 | 437 | 2610-3075 | 3555-.... | 3686-3718 | 3718 | 3-24-31 | 12,000 | |
| D. M. Peterson 1-A | 479 | 2625-3050 | ....-.... | 3670-.... | 3670 | | | Cem cas 3668 ft. |
| Karona Oil Co.'s J. N. Peterson 1 | 360 | 2544-2979 | 3478-.... | 3601-3616 | 3616 | 3- 1-31 | 10,000 | *1000 |
| Luling Oil & Gas Co.'s Brightwell 1 | 356 | 2560-3053 | ....-.... | 3604-3630 | 3630 | 3-18-31 | 15,000 | *150 |
| Magnolia Pet. Co.'s Della Crim 1 | 434 | 2616-3098 | 3535-3596 | 3688-3712 | 3712 | 3- 7-31 | 15,000 | |
| Della Crim 2 | 360 | 2580-3029 | 3424-.... | 3604-3617 | 3617 | 3-16-31 | 15,000 | |
| Della Crim 4 | 381 | 2610-.... | ....-.... | 3640-3660 | 3660 | 3-20-31 | 20,000 | |
| Della Crim 5 | 389 | 2595-3017 | 3500-.... | 3637-.... | 3640 | | | Cem cas 3630 ft. |
| Ben Laird 1 | 369 | 2575-2990 | 3476-.... | 3574-3587 | 3587 | 3-27-31 | 25,000 | |
| Navarro Oil Co.'s R. N. Blackstock 1 | 422 | 2607-3068 | ....-.... | 3666-.... | 3674 | | | Cem cas 3664 ft. |
| John W. Olvey-Sample's W. R. Crim (20-ac) 1 | 458 | 2645-3078 | 3558-3612 | 3688-3708 | 3708 | 2-21-31 | 15,000 | *7255 |
| W. R. Crim (20-ac) 2 | 475 | 2640-3093 | 3575-.... | 3708-.... | 3743 | | | Coring sand |
| H. R. Smith-Houston Oil Co.'s D. M. Peterson 1 | 446 | 2638-3036 | 3520-.... | 3660-3698 | 3698 | 2-25-31 | 10,000 | *3200 |
| H. R. Smith-Gulf Prod. Co.'s D. M. Peterson 1 | 441 | ....-3015 | 3535-.... | 3660-.... | 3664 | | | Cem cas 3648 ft. |
| Stanolind O&G Co.'s Ben Laird 1 | 430 | 2625-3135 | 3499-.... | 3624-.... | 3629 | | | Cem cas 3622 ft. |
| Ben Laird 2 | 448 | 2602-3042 | ....-3546 | 3655-.... | 3656 | | | Cem cas 3655 ft. |
| J. R. Travis (Holloway-Hardin's) A. G. Morton 1 | ... | 2490-2840 | 3435-3517 | ....-.... | 3561 | 3-27-31 | | D&A (top Georgetown 3533 ft). |
| C. E. Upchurch et al's W. P. Brightwell 1 | 340 | 2600-.... | 3515-.... | 3608-3678 | 3678 | | | Testing production |
| Westheimer-Daube-Cox & Jake Hamon's D. M. Peterson 1 | ... | 2652-2920 | ....-.... | 3638-.... | 3651 | | | Sd for pipe line. |
| Ward Oil Corp.-J. R. Elliott & Johnston's E. S. Thrash 1 | ... | 2764-3168 | ....-.... | 3646-.... | 3671 | | | Coring sand |

*Indicates production pinched.
NOTE—Humble's Crim lease has five wells flowing into same battery.

**SMITH COUNTY**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Guy V. Lewis et al's S. S. Cook 1 | ... | 2736-3103 | 3535-3620 | 3675-3696 | 3696 | 3-30-31 | 15,000 | Shut in |

**UPSHUR COUNTY**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Tips DeArmand-Capps et al's Chas. Cobb 1 | 428 | 2591-3118 | 3723-.... | 3777-.... | 3781 | | | Coring sand |
| McGinley Corp.'s Reeves-Merritt 1 | 358 | 2570-2930 | 3487-3523 | ....-.... | 4004 | 3-21-31 | | D&A |

# Gregg County Producers—Longview Field

| | Elev. | Pecan Chalk | Austin Chalk | Producing Horizon | Total Depth | Date Comp. | Initial Prod. | Current Production or status |
|---|---|---|---|---|---|---|---|---|
| Arkansas Fuel Oil Co.'s F. K. Lathrop 1-B | 414 | 2578-2955 | 3534-.... | 3588-3607 | 3608 | 3-26-31 | 12,000 | *4580 |
| R. S. McKinley 1 | 395 | 2446-2958 | 3535-3556 | 3578-3600 | 3600 | 3-12-31 | 15,000 | *4550 |
| Arkansas Fuel-Yount-Lee Oil Co.'s F. K. Lathrop 1-A | 401 | 2458-2870 | 2528-3554 | 3569-3587 | 3587 | 1-26-31 | 12,000 | *4370 |
| F. K. Lathrop 2-A | 420 | 2488-2984 | ....-.... | 3590-3613 | 3613 | | | Testing |
| F. K. Lathrop 3-A | 415 | 2415-2978 | ....-.... | 3583-3605 | 3605 | 3-27-31 | 15,000 | *3075 |
| Harry W. Elliott et al's S. G. Andrews 1 | 374 | 2565-3016 | 3472-.... | 3636-.... | 3650 | | | Testing |
| E. E. Eslick-Little et al's Springfield Church 1 | 411 | 2441-2938 | 3547-3578 | 3597-3621 | 3623 | 3-25-31 | 7500 | *630 |
| Frank Foster-East Texas Ref. Co.'s Jasper Rodden 1 | 333 | 2320-2882 | 3464-3494 | ....-3534 | 3542 | 3-13-31 | 3000 | *2630 |
| Mrs. Mamie Hammond et al's J. M. Hamby 1 | 376 | 2507-3015 | 3600-.... | ....-.... | 3730 | | | Drilling (top Georgetown 3685 ft.) |
| O. L. Hickman et al's Maude Smith 1 | 373 | 2300-2925 | 3476-3514 | ....-.... | 3580 | 3-21-31 | | D&A (top Georgetown 3555 ft). |
| S. F. Hurlburt et al's A. J. Page 1 | 438 | 2440-3012 | ....-3658 | ....-.... | 3690 | 3-22-31 | | D&A (top Georgetown 3667 ft). |
| Magnolia Pet. Co.'s B. E. Rodden 1 | 417 | 2411-2955 | ....-.... | 3597-3616 | 3616 | 3-15-31 | 15,000 | *90 |
| B. E. Rodden 2 | 409 | 2485-.... | 3540-.... | 3586-.... | 3587 | | | Cem 6⅝ cas 3572 ft. |
| K. E. Merren-Miller-Van Horn's Maude Smith (10-ac) 1 | 377 | 2373-2941 | 3415-.... | ....-.... | 3605 | 3-19-31 | | D&A (top Georgetown 3550 ft). |
| Navarro Oil Co. et al's G. B. Tenery 1 | 419 | 2585-2981 | 3564-3581 | 3587-3601 | 3603 | 3-18-31 | 7500 | *185 |
| W. C. Ray Drilling Co.'s Maude Smith 1 | 374 | 2339-2938 | 3458-3511 | ....-.... | 3570 | 3-21-31 | | D&A (top of Georgetown 3546 ft). |
| Roeser-Pendleton, Inc.-Foster-East Texas Ref. Co.'s B. E. Rodden 1 | 408 | 2405-2898 | 3531-3570 | 3575-3592 | 3592 | 3-12-31 | 15,000 | *3670 |
| Shell Pet. Corp.'s J. D. Davis 1 | 404 | 2359-2983 | 3482-3560 | 3596-.... | 3600 | | | Cem 7-in cas 3580 ft. |
| Sultan Oil Co.'s S. F. Thrasher 1 | 328 | 2420-2910 | 3496-.... | 3533-.... | 3540 | | | Cem 7-in cas 3530 ft. |
| Selby O&G Co.'s P. J. Snavely 1 | 273 | 2488-.... | 3464-3508 | 3528-3534 | .... | | | |
| | | | | 3572-3583 | 3583 | | | Cem 7-in cas 3528 ft. |
| Simms Oil Co.-Stanolind O&G Co.'s G. B. Tenery 1 | 398 | 2550-.... | ....-.... | ....-.... | 3590 | | | Cem cas after blowout |
| Tidal Oil Co.'s F. K. Lathrop 1 | 430 | 2465-3075 | ....-.... | 3603-.... | 3636 | | | Coring shale |

# South Texas Field Developments

EARL POST, *Staff Correspondent, San Antonio, Texas*

▼ ▼ ▼

## Test Drilling in Grayburg Pool Incites Wide Interest

San Antonio, Texas.—A great deal of interest has been manifest in the Grayburg pool, seven miles southwest of the Pettus pool, Bee County, as a result of the showing found in Mauldin and Fisher's A. J. Kimball 1 at 3536-39 feet. The well showed 175 pounds pressure of dry gas in a 3½ minute test. A further test was not available as the seat gave away.

The well is the second in the entire district to show up for any kind of production after approximately a year of consistent drilling. Grayburg Oil Company's Kimball 1 was brought in as about a 150-barrel oil producer last summer from a sand at 3545-55 feet. It later went dead and was subsequently abandoned. Other tests were sunk in the sector, but all of them failed to show anything encouraging.

The new possible producer is located 300 feet south and 21 degrees east of the original Grayburg Kimball test. It is 1250 feet from the north line and 1000 feet from the west line of the tract in the Stephen Winship survey.

Whether the well will be completed at this depth is not known, but it is an indication of further production in the immediate area.

The only other test in this district now in operation is Hicks et al's Billingsly 1, one mile northeast of the possible producer in the B. Q. Hadley survey. At last reports the test was down 2877 feet.

In the old field, United Production Company continues its active campaign. Ray 33 is rigging up and preparing to spud, while Ray 35 is making hole at 3125 feet. Ray 36 is now around 1400 feet and making good progress.

Mauldin's Mauldin 1, just south of the townsite, which created so much excitement recently when it showed up for a producer and indicated an extension to the field, is still waiting on casing. It has the sand at 3847-54 feet, although its total depth is 3862 feet.

Two Bee County wildcats are active, Alexander's McFall 1, three miles south of Skidmore, which is around 450 feet and Catlett and O'Neill's Miiler 1, eight miles west of Beeville, which is now drilling at 1200 feet.

## Complete Two Larger Oil Producers in Duval County

San Antonio, Texas.—Two large oil producers have been completed in Duval County. One is S. R. & C. Oil Company and Vacuum Oil Company's Duval County Land Company 4, which is making 550 barrels of oil and about 10,000,000 cubic feet of gas from a total depth of 1739 feet; and the second oil producer in the S. R. C. pool after three failures.

The well is located 300 feet due west of the discovery well in Section 293, which is the only other producer in the field. Tests to the north, east, south, failed to make producers.

Another location, the first of several tests planned by these operators, is said to have been made to the north of the new producer, although the official announcement has not been made.

This well has casing set at 1710 feet. It cored a broken sand at 1710-29 feet and then went into a sand which showed oil to 1733 feet. It was drilled to 1739 feet total depth. This well got the pay about seven feet higher than the discovery test.

S. R. & C. Oil Company and Vacuum Oil Company have joint lease on about 10,000 acres in the section and an active campaign is evident.

Magnolia Petroleum Company's Wilson 2, 4100 feet south of the extension discovery well in the S. & O. pool, Duval County, has been completed as a 500-barrel oil well, providing another extension. This well has 6⅝-inch casing set at 2368 feet. It cored a broken sand at 2325-36 feet; oil sand at 2336-40 feet; gas sand at 2358-64 feet; oil sand at 2364-77 feet. A good producer is expected.

In the immediate vicinity of the recently completed Duval Oil Company's Bishop Cattle Company 2, which made 1500 barrels initial at a total depth of 2412 feet, Frasher and Schoolfield are drilling Bishop Cattle Company at about 725 feet. It is in Section 135 in the south extension of the S. & O. pool.

The deepest well in the county at this time is Humble Oil & Refining Company's Kohler 50, which is repairing its rig after reaching 5595 feet. This well is located in Survey 164, Kohler pool.

## Extension of Saxet Field Is Indicated by Promising Well

San Antonio, Texas.—Although the well is not to be completed at its present level, Bess et al's Boory 1, 2½ miles northwest of the Saxet field, Nueces County, indicates an extension to that area. On a drill stem test of a sand at 4037-46 feet, the well showed 750 pounds pressure and about one fourble of oil in three minutes. It is to be drilled deeper.

One producer was completed in the field, Houston Oil Company's Rand Morgan 2, which is estimated as a 35,000-000-cubic foot gasser, spraying a large quantity of high gravity oil. The well originally was drilled to 4095 feet, but was plugged back two feet to 4093 feet. It is showing 1500 pounds pressure through a one-half-inch choke.

Several tests are in the process of completion in the main field. Saxet Oil Company's Dunn 7 had drilled out the plug at 4296 feet and is rigging up to swab. It showed 750 pounds pressure and a little oil in five minutes on a drill stem test. Moody-Seagraves Producing Company's Sedwick 1, which has casing set at 4097 feet, is expected to be on production shortly.

Houston Oil Company's Ollie Purl 1-B, Agua Dulce pool, has reached a total depth of 5660 feet and is drilling.

H. H. Weinert has abandoned a Nueces County wildcat, his Mohle 1, Section 94, just north of the Driscoll townsite, at 5408 feet, as a failure.

## Jim Wells County Gas Well Opens New Producing Area

San Antonio, Texas.—Carsil Oil & Gas Company's McGill 1, Jim Wells County, blew in out of control early March 29, while it was in the process of completion and was still running wild late March 30. It opens an entirely new field in Jim Wells County, 12 miles from nearest production.

The well is 10 miles north of Alice and about 12 miles southwest of Larcro Gas & Petroleum Company's Wade 1, Jim Wells County, nearest production. Its exact location is 1665 feet from the west line and 654 feet from the south line of the William D. Baldwin Survey, three miles north of the townsite of Armagosa.

The well cored a sand at 2683-89 feet, just below a lime cap from 2681-83 feet. Casing was set on the caprock and the well drilled in. On a drill stem test, the well developed 600 pounds pressure in one minute. Since it has blown in, however, no check or estimate has been available on the production. Some figures run as high as 60,000,000 cubic feet. It is showing no oil.

The company has ordered equipment from Refugio to be used in capping the well if possible. It is possible that it will be controlled with considerable ease inasmuch as there is sufficient equipment in Refugio for handling wild wells with such tremendous pressure.

Carsil Oil & Gas Company has approximately 3700 acres in the immediate vicinity of the well, and a drilling campaign in quest of oil is likely.

## Fourth Well for Slick Pool Is Located in De Witt County

San Antonio, Texas.—The fourth well for the new Slick pool of northern Goliad County has been announced. It is the first to be drilled across the county line in De Witt County and will undoubtedly attract considerable interest.

The new location is Gibson and Strum's E. T. Clark, 1240 feet from the south line and 330 feet from the west line of the 498.5-acre tract in the Dolores Aldereda Survey, about one mile north of the discovery well.

The Slick Estate's Reidel 1, 1830 feet southwest of the discovery well in the W. C. Brown Survey, is drilling around 600 feet, after setting surface casing.

## Second Successful Well in Live Oak County Expected

San Antonio, Texas.—A second oil producer in the Mt. Lucas district of Live Oak County seems possible as Houston Oil Company's Brown Land & Cattle Company 4 is preparing to make a test of the sand encountered at 5012 feet, which showed oil and gas. It has a shale at 5012-17 feet at which depth drilling was halted.

The screen has been ordered and the test is expected to be made within a few days.

This well is located in the southwest corner of the M. B. Kivlin Survey. The Houston's Boothe 1-A, also in this survey, made a 30-barrel producer at 5270-77 feet several months ago.

The company has definitely abandoned its Brown Land & Cattle Company 3 at a total depth of 5573 feet, where it had a stuck drill stem.

This company is drilling another well in the Mt. Lucas area, three-fourths of a mile south of the Brown Land & Cattle Company 4. It is Parr 1-A, John McMullen Survey, which has set surface casing at 574 feet and is resuming drilling.

An active drilling campaign has been conducted to test the deep sands of this sector for more than a year, the result being one deep producer.

## Real County Test is Failure At Contract Depth, 4002 Feet

San Antonio, Texas.—Evans and Sprinkle's Marcus Auld 1, Section 15, Block D, H. E. & W. T. Ry. Survey, Real County, has been drilled to 4002 feet, contract depth, without encountering the sand found in the discovery well four miles to the northeast. Evans and Gant's Jeff Love 1, Kerr County, discovery test, made a producer at 3391 feet.

The failure of this well to get the sand anywhere near the level corresponding to the Love 1 indicates a boundary to the district in this direction.

The same operators' Haby 1, Section 175, A. B. & M. Survey, seven miles southwest of the Love well, is running about 200 feet high, it is said. The well is now 1365 feet deep. The other well in the Real County Section of the field is Gant and Kilgore and Eastland Oil Company's Dan Auld 1, Section 23, CCSD & RGNR Railway Survey, three miles southwest of the Love test. It is drilling around 1560 feet.

## Tests Driling in Caldwell County May Prove Promising

San Antonio, Texas.—Some interesting results are expected from at least one of the tests being drilled in the vicinity of the J. E. Mills et al's McMahon 1, Caldwell County, which recently showed for a small producer at 2185 feet. The test has been pumping and heading some oil, the estimates being 20 barrels daily average.

A gas blow-out was recorded between 500 and 550 feet in the same operators' McMahon 2, 50 feet east of the first well to the shallow gas sand as found in the first well at 900 feet. It likely will be sunk down to the present producing horizon, however. Both wells are in the Pinchback Survey, six miles southeast of Lockhart.

V. F. Neuhaus and Camp's J. B. Moore, three-fourths of a mile northwest of the Mills test, in the William Clinton Survey, was drilling at 2186 feet at last reports.

Also in this sector, Turner, Wharton and Anderson's Harris 1, Joshua Gray Survey, Bastrop County, is drilling at 1682 feet.

## Well South of Darst Creek Productiton Looks Promising

San Antonio, Texas.—Sun Oil Company's Dowdy 1, one-fourth mile south of present production in the Darst Creek field, Guadalupe County, probably will turn into a flowing well. The test has not been placed on pump, but is standing full of oil and is slopping over at intervals. It has total depth of 2593 feet, four feet in the Edwards lime.

In the main field, Sun Oil Company's Knoblock 14 has been completed for an initial production of around 750 barrels at 2555-70 feet in the Edwards lime.

# Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

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## Humble Diminishes Drilling Work in Raccoon Bend Field

Houston.—Drilling operations in the Raccoon Bend field will be diminished for a time as a result of the decision of Humble Oil & Refining Company to abandon all of its operations in that area with the exception of two tests. The only two wells that will be left for active operations are Paine 12 and Remmert 1.

Included in the abandoned operations are a number of locations which were made during the past year but which were never drilled. Several of the wells abandoned have been drilled to 3000 and 4000 feet. Drilling in this field has been on the wane for the past two or three months and had finally dwindled down to three active drilling wells. One of these wells, E. Grawunder 1, was completed last week as a shallow gas well at 961 feet for 8,000,000 cubic feet of gas.

## Manvel Prospect, Brazoria County Test, to Be Deepened

Houston.—The Texas Company on March 31 was preparing to drill deeper in Ewing 1, deep wildcat which is the first test of the Manvel torsion balance prospect, Brazoria County. The well came in the latter part of the past week as a dry gas well at 7590 feet, showing 1500 pounds pressure originally, but on the second day the pressure had declined to 200 pounds. It subsequently dropped to further extent, and upon being bailed the well was reported to have shown salt water.

In completing the well last week four joints of screen were set on bottom. Production was from 120 feet of broken sand and shale in the upper part of the Jackson formation, which had been drilled into approximately 250 feet.

## Evangeline Field Well Sets New Gulf Coast Depth Record

Houston.—Yount-Lee Oil Company had set a new record for deep tests along the Gulf Coast last week when it abandoned Houssiere-Latrielle 9 in the Evangeline (or Jennings) field, Acadia Parish, South Louisiana, at the depth of 8900 feet. The test was located on the southeast edge of the field in Section 47-9s-2w.

The record for the Gulf Coast territory was formerly held by The Texas Company's Rayne Heirs 5, located on the south side of the same field. It was drilled to 8730 feet where it was abandoned in sandy shale.

The deepest producing horizon in the field has been found at the 7450-foot level. Houssiere-Latrielle 8 of Yount-Lee Oil Company having been completed at that depth for initial production of 2000 barrels per day. Two other wells of Yount-Lee Oil Company, Houssiere-Latrielle 6 and 7, were both completed as producers from the 7400-foot level. Both wells were brought in for a large initial production.

The operators of the test were encouraged in their attempts to strike a lower producing sand when the well tried to blow out at 8613 feet, showing gas and oil on the drill stem. A gas and oil sand was encountered at 8653 feet and a third show was obtained when the well blew out at 8666 feet, making gas and oil. Salt water began to show up in the test and the well was drilled deeper in an effort to penetrate the sand sufficiently to establish commercial production, but the deepening was unsuccessful and the hole was finally abandoned in shale.

## Three Wells Are Completed Around Barbers Hill Dome

Houston.—Potential production of the Barbers Hill field was given a substantial boost last week when wells were completed on three sides of the dome for a total initial yield of 2350 barrels per day. Mills Bennett Production Company completed its Barber 1-B on the north flank of the dome, near the discovery well of that flank, for an initial production of 130 barrels daily at 5320 feet.

The producing area on the west side of the field was more closely linked with completion of Yount-Lee Oil Company's Winfree 1, Smith Survey, when the well was brought in for an initial of 1200 barrels of 30 degree gravity oil at 5495 feet. Seven joints of five-inch screen and a full string of 2½-inch tubing were run before the well was brought in flowing through three-eighths-inch choke, registering 660 pounds pressure.

The south flank of the field recorded two completions in the Bloodgood Survey when Yount-Lee Oil Company completed its work-over well, Chambers County Agriculaural Association 16, for 330 barrels of 30 degree gravity oil at 5293 feet. The well is flowing through 1¼-inch choke. Chambers County Agricultural Association 18 was completed after three joints of five-inch screen had been set and 2½-inch tubing had been run at 4465 feet. Initial production of the well was recorded at 690 barrels daily.

## Several Completions Loom For Pierce Junction Field

Houston.—Activities in the Pierce Junction field indicate completion of three or four wells within the next few days for that area and a northwest extension of several hundred feet for the present producing area. Completion of Bryan Ward Trustee's Prudential Investment Company 1, a work-over, during the past week added 200 barrels daily to the potential of the field.

Mike Kouri and Grayburg Oil Company have set 160 feet of 4½-inch screen in Bender 1, located on the south end of the W. H. Jones subdivision, on the northwest side of the dome. The well tested salt water at the original depth of 4235 feet and has been cemented back 100 feet. Rio Bravo Oil Company's G.H.&S.A. 102 has set casing at 4419 feet and will drill the plug some time this week. An oil sand was penetrated from 4398-4419 feet.

Smith et al's Bender Fee 3 is down to the producing level for the northwest side of the field and two joints of 4½-inch screen has been set at 4467 feet. Warner-Quinlan Company

is approaching the producing level in its Minchen 2. Two joints of screen were set in the well at 4200 feet but swabbing failed to make the well produce at that level and it is being drilled to a second producing horizon.

## Fourth Lake Grande Prospect Is Abandoned at 5861 Feet

Houston.—Humble Oil & Refining Company, operating jointly with Gulf Refining Company and Shell Petroleum Corporation, has abandoned the fourth test on the Lake Grande Ecaille prospect, Cockrell-Moran 2. This test, located in Plaquemine Parish, 3775 feet north and 5650 feet west of the northeast corner of Section 1-12s-26e, encountered salt at 5445 feet and was finally abandoned at 5861 feet without having drilled out of the salt.

Two of the three tests that have been completed showed some oil but were abandoned in salt, top of the salt having been struck in Cockrell-Moran 1 at 1750 feet. Lake Washington 1 had a show of oil at 5150 feet but failed to produce commercially and was abandoned at 5450 feet.

Gulf Refining Company's Burras Levee Board 2-B, Plaquemine Parish, was abandoned in anhydrite at 2460 feet. This is the second test drilled on the Rose Dome prospect, located by seismograph in 1928. The first test was abandoned at 250 feet when the well blew out and cratered, causing the rig to be lost in the hole. A small show of gas hit in Burras Levee 2-B at 835 feet was killed and a sulphur show was passed through below the top of the cap rock at 2216 feet.

## Another Seismograph Unit Is Sent to South America

San Antonio, Texas.—Another seismograph unit manufactured in San Antonio has been sent to South America via New Orleans to be used in the search for oil in Venezuela. It was manufactured by Petty Geophysical Engineering Company of San Antonio for the Sinclair interests.

It will be used in Venezuela by Venezuela Petroleum Company and subsidiary companies in exploration work. A crew of seven experienced men accompanied the instruments to South America, where the geophysical operation will be conducted principally from boats on the large rivers of Venezuela.

Chief T. L. Allen is in charge of the crew. The chief observer is J. D. Mong. Other members are: Cecil Haynes and W. L. Crawford, observers; Robert Valentine, trouble shooter; David McClellan, shooter, and F. M. Ellicott, computer.

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San Antonio, Texas.—More producers were reported during the past week in the Refugio deep horizons. Moody-Seagraves Producing Company's O'Conner 7, in the eastern flank, is making about 80 barrels of oil under a pressure of 2050 pounds on a one-fourth-inch choke. It is 6449 feet deep. United Production Company's Power 3, drilled from the 5400-foot horizon, is estimated at 300 barrels from 6444-61 feet. It is showing 2100 pounds pressure on the casing and 1800 pounds on the tubing, both through one-fourth-inch chokes.

A well being watched with considerable interest at this time is Houston Oil Company's Rooke 1-B, which is down 6658 feet, below any producing level in the field. It is one-half mile west of any production and two miles southwest of the townsite.

## Low Oil Prices Vigorously Compete With Natural Gas

New York City.—A bulletin issued by Standard Statistics Company, setting forth facts concerning the natural gas industry, cites low oil prices as a vigorous competitive factor in retarding the sales of industrial natural gas. It is stated in this bulletin that oil possesses many of the important attributes of gas and is successfully competing on a price basis. Assuming that eight gallons of fuel oil are approximately equivalent to 1000 cubic feet of natural gas on the basis of their respective heat values, 5500 cubic feet of gas will then do about the same work as one barrel of oil. Prices for oil fuel as well as gas vary considerably with the locality and grade, but the following figures give an approximate idea as to the prices at which gas must be sold to compete, on a thermal unit basis, with oil:

| Fuel oil per barrel | Gas per million cubic feet |
|---|---|
| $2.00 | $.36 |
| 1.75 | .32 |
| 1.50 | .27 |
| 1.40 | .255 |
| 1.30 | .24 |
| 1.20 | .22 |
| 1.10 | .20 |
| 1.05 | .19 |
| 1.00 | .18 |
| .95 | .17 |
| .90 | .165 |
| .80 | .145 |
| .70 | .13 |
| .60 | .11 |
| .50 | .09 |

Costs of burning which, for oil, are only slightly greater than for gas, have not been taken into consideration above, but it will be readily seen that gas must come at a very low figure in order to compete on a price basis. The following statement is significant of the situation prevailing in the competitive fuel market and offers the oil industry some well-founded food for thought and action in cultivating increased outlets for its surplus fuel oil supply:

"As an indication of the manner in which competition has been developing of late, we have been reliably informed by manufacturers of a number of instances in which they have been able to draw contracts for oil at prices which neither coal nor gas companies could meet.

"Such circumstances gather additional significance when considered in connection with the fact that such reports come, in some cases, from manufacturers who can use either gas or oil and who are buying for plants in districts thought to be 'sure-fire' outlets for natural gas in large quantities."

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Houston.—Jefferson Lake Oil Company has abandoned Lake Peigneur 10 in Iberia Parish at 2270 feet in salt. This is the tenth test drilled on this dome by this company, all of the wells having been abandoned at less than 900 feet prior to this test.

The dome was located in 1895 with the discovery of rock salt at 334 feet by Joseph Jefferson and has been the site of salt mining activities since 1923. Most of the tests drilled have been put down in an attempt to test the sulphur possibilities of the cap rock.

# Louisiana--Arkansas Field Notes

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## Killing "Stripper" Wells to Be Opposed in Louisiana

Shreveport.—Any move on the part of oil companies to abandon "stripper" wells as a result of the recent cut in the price of oil which is especially felt in Louisiana where there is a heavy severance tax on a gravity basis running as high as 11 cents per barrel for 41 gravity and above, will meet with vigorous opposition by the minerals division of the Louisiana Conservation Commission.

Dr. J. A. Shaw, division director, declared that "it is not a good conservation measure to abandon all of the small producing wells at a time of depressed conditions in the oil business." All applications for abandonment of stripper wells will be most thoroughly investigated before being allowed, it was indicated.

In this connection Dr. Shaw called attention to the following rule, No. 64, of the Louisiana Conservation Commission, which prohibits the abandonment of producing oil wells:

"In order to further conserve oil resources of the state of Louisiana the following has been adopted and promulgated by the department of conservation, state of Louisiana:

"It shall be unlawful for any person, firm, association or corporation to abandon any producing oil well in the state of Louisiana by pulling casing, when, in the opinion of the conservation commissioner the same is contrary to good practice in conserving our oil resources."

The rule was signed by Robert S. Maestri, Louisiana Commissioner of Conservation.

## First of Six Zwolle Tests Ready to Spud March 29

Shreveport.—Sabine Royalties Company, Incorporated, Sunday, March 29, was ready to spud the first of a series of six tests to be drilled in the southeast part of the Zwolle east field in Sabine Parish, Louisiana. The new location, the only one made in Zwolle during the last week, is Bill Hill 1, NW NE NE Section 5-7-11. The geological work is in charge of H. D. Easton, Shreveport geologist.

Production in Merritt, Trustee's Byrd 1, SE NW Section 1-7-11, which week before last was completed at total depth of 2445 feet, is increasing, the well now flowing 1200 barrels daily through half-inch choke. Its initial was first set at 700 barrels daily. It now develops that this production is coming from the Zwolle marl and not from a sand encountered immediately under black shale, as was at first reported.

Whether W. M. Coates and associates' Collins 1, SW NW Section 28-9-10, a wildcat in Natchitoches Parish, Louisiana, which showed oil in a broken sand and shale from 4039 to 4080 feet and then tested 10 joints of mud and salt water in drill stem test at 4091 feet, will be abandoned at present depth is problematical. An interesting development during the last week was the fact that paleontologists have now pronounced the formation that showed the oil as lower Cretaceous. It had at first been identified as Woodbine, a part of the shoreline on the southeast flank of the Sabine Uplift. Elevation is 260 feet.

Beside the new test for Zwolle there were but three locations made in North Louisiana during the last week. W. N. Hankins has rig up for Newell 1, Section 12-19-11, Bellevue area, Bossier Parish. Shreveport Oil Corporation will drill another test on its Hicks lease in Section 32-21-15, Pine Island field, Caddo Parish, and E. T. Oakes has derrick up for a wildcat, Bryant 1, Section 30-13-15, in the muchly explored Logansport district of west De Soto Parish.

Libby and associates abandoned Foster 1, NE SE Section 29-15-16, southwest Caddo Parish, a wildcat, as dry at 3225 feet. S. A. Guy's Dowling Brothers 1, Section 31-14-14, a wildcat in De Soto Parish, was abandoned at 1354 feet, leases being expired. East of the Zwolle east field, Franks and associates abandoned Dew 1, Section 22-8-11, as a dry hole at 2534 feet. A southeast edge test of the Richland Parish gas field, Southern Carbon Company's C. M. Noble 1, Section 37-15-6e, was abandoned as a salt water hole at total depth of 2495 feet.

## Try to Extend Urbania Field in Arkansas Again a Failure

Shreveport.—The drilling spurt that resulted from the completion of a small producing oil well in Miller County, southwest Arkansas, last summer when V. C. Lenz and associates at total depth of 2850 feet, completed Johnson 1, apparently sang its swan song during the week ending March 28. Lenz abandoned both his two other tests in that area, one at total depth of 4700 feet, leaving Miller County without a single active drilling operation. Johnson 2, Section 24-15-26, was abandoned at total depth of 4700 feet as a salt water hole, although 800 feet of eight-inch casing had recently been cemented to shut off a water flow. Johnson 3, NE NW Section 24-16-26, met the same fate at total depth of 2850 feet. Salzer and McRae abandoned Ross 1, NE NW Section 9-16-26, as dry in gumbo at 475 feet. Five other tests that were drilling once are now shut down.

An effort to extend the Urbana oil field, so far confined to Section 10-18-13, Union County, Arkansas, three miles southwest ended in a dry hole during last week, C. H. Murphy and associates abandoning Union Sawmill 1, NW SW Section 18-18-13 as a dry hole in red beds at total depth of 3615 feet. This test topped Nacatosh at 2198 feet, tested salt water in drill stem test in that formation, and tested salt water from 2537-42 feet, probably Blossom. Red beds were topped above 3000 feet and the sand found under these beds in the producing area had not appeared at 3615 feet.

Citizens Gas Company completed a wildcat in Crawford County, northwest Arkansas at the shallow depth of 960 feet as a 20,000-foot gasser during the last week in Hood 1, NE SE Section 18-9n-32w. The gas probably will be used as fuel for future operations.

Ohio Oil Company completed a 143-barrel pumper in Pumphrey 1, Section 12-17-14, in the southeast part of Champagnolle, Union County, at total depth of 3011 feet. The well as most Champagnolle producers do, is making about 32 barrels of salt water along with the oil.

# ▼ MISSISSIPPI ▼

## Test in Amory District in Monroe County Unsuccessful

Jackson, Mississippi. — Amory Petroleum Corporation's Harris 1, NW NE Section 18-13s-17w, in Monroe County, Amory district, the first gas field of Mississippi, which had checked 26 feet high in hitting a gas sand, proved disappointing when bailed March 25, nothing showing when it was tested at 2350 feet, elevation being 455 feet. The test was shut down after it had been bailed to within 200 feet of bottom without a showing. A strong gas pressure was encountered when the test first hit the gas sand several weeks ago and it had been predicted the test would be the largest gasser in the Amory field, all of three preceding gas wells being of small capacity. Plug was drilled at 2324 feet. It probably will be deepened.

The Jackson gas field added a gas producer during the week ending March 28 when Pioneer Oil & Gas Company's Ragland 1, 1590 feet north and 1700 feet east of southwest corner Section 12-5-1e, Rankin County, in the southeast part of the field was completed in Midway chalk at total depth of 2390 feet making an estimated daily yield of 20,000,000 feet; elevation was 270 feet. The Midway black shale was topped at 2296 feet and the chalk at 2485 feet.

Central Oil & Gas Company, drilling Cameron 1, SE SE Section 11-9n-1e, Madison County, the county immediately north of Hinds, junked the hole at 3460 feet in gumbo, with four fourbles of drill stem and the bit in the hole. The well is making 3000 barrels of fresh water daily; 4½-inch casing will be set at 1700 feet with 107 feet of screen and the well made an artesian water well. It had been originally designed as a 4000-foot test. It had a show of gas at the 1550-foot level and 6⅝-inch casing had been cemented and the test bailed but without showing oil or gas.

One new wildcat location was made in Mississippi during the last week. This was Eagle Lake Oil & Gas Company's Kiger 1, Section 9-18n-2e, Warren County, Vicksburg district. Derrick is already up. This company was recently organized with a capital of $100,000, J. T. Austin of Monroe, Louisiana, being head of the company with the other incorporators being Vicksburg men.

Pelican Natural Gas Company of Shreveport headed by Samuel D. Hunter, is taking over a block of 30,000 to 40,000 acres from J. J. Keen in Neshoba County, Mississippi. The block centers in township nine north, range 11 east. Keen blocked the acreage last fall paying $1 bonus for each tract and an annual rental of twenty-five cents per acre under a 10-year least. A drilling obligation calls for a test by November, 1932.

Sun Oil Company, Dallas, Texas, is expected to start a test in north Hinds County or western Madison County within 60 days on a large block of wildcat leases acquired some time ago from Homer P. Lee of Tulsa. A test within three years of blocking the acreage was said to have been the lease consideration for this block and the deadline is now drawing near for drilling.

George L. Pace, who with Carter Oil Company and others is interested in the wildcat test drilled in Grenada County, north Mississippi, which showed some gas in the Eutaw and later tested water, has stated that the test, Dubard 1, NW NW Section 18-22-4e, will be abandoned at present total depth of 4012 feet in red shale, 4000 feet having been contract depth. This test topped Selma chalk at 1787 feet.

Gulf Refining Company late last week was drilling hard chalk at 2878 feet in its wildcat test in Clarke County, east central Mississippi, which with elevation of 221 feet is now reported to have topped Selma chalk at 2635 feet. Midway black shale was topped at 2205 feet.

## First Bulletin of Southwest Texas Oil Scouts Is Popular

San Antonio, Texas.—Bulletin Number One, publication of the Southwest Texas Oil Scouts' Association on "Oil and Gas Development in Southwest Texas," has met with a big demand. Numerous inquiries have come in from distant points as well as locally.

This bulletin, the first to be attempted by the association, and the beginning of a proposed series of annual issues, came off the press a short time ago, and achieved considerable distribution here when it was introduced to the public during the recent national convention of the American Association of Geologists.

The bulletin contains a vast amount of information on all phases of oil field work and development in this section of the state. Following introductory features, there is a chapter on production and development, covering drilling activity during 1930, classification of producing fields, oil production by fields, oil recovery by fields.

Next is a division on description of the producing fields, covering the Luling fault line area, Laredo district, Coastal district, and giving a survey of gas production.

There are separate chapters on pipe lines and refineries, leasing and title work (with a table on acreage ownership), and geophysical activities.

Twenty pages are devoted to the geology of Southwest Texas, the separate headings including: topography and drainage, general stratigraphy, Balcones fault zone, igneous rocks, economic products, southern Edwards Plateau, Laredo-Pettus area, and Corpus Christi-Refugio area.

In conclusion there are special articles on general paleontology of Southwest Texas, aerial photographic mapping, corrosion in Salt Flat and Darst Creek fields, and on drilling straight holes.

In working up the book, which contains a total of 86 pages, and which is bound in attractive, durable, special paper covers, the scouts received co-operation of several engineers, geologists and paleontologists. The bulletin is illustrated with several maps, drawings and tabulations.

In the foreword, the statement is made that "whether or not the publication of similar bulletins will be repeated in the future must rest upon the response of the entire industry to this effort." Copies of the book may be obtained by addressing the Southwest Texas Oil Scouts Association, San Antonio, Texas. The price of the bulletin is $3.75 per copy.

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San Antonio, Texas.—The Texas Company's Allen Land & Cattle Company 1, location for which is now being made, is to be the first of a series of probably four tests to be drilled in the southwestern part of Brooks County. This block consists of 7110 acres and is located in the San Antonita Grant.

Houston Oil Company's Wormser-Holbein 3, Palo Blanco de Maguellas Grant, is now drilling around 4325 feet. It is in the Lassiter district, where this company is carrying on a rather extensive drilling campaign with some interesting results.

# Completions for Past Week in U. S. Fields

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*For Tabulation and Comparison See Market Section*

## ARKANSAS

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| UNION COUNTY (Champagnolle)— | | |
| Ohio Oil Co., Pumphrey 5, 12-17-14 | 143 | 3011 |

## MISSISSIPPI

| | | |
|---|---|---|
| RANKIN COUNTY (Jackson)— | | |
| Pioneer O&G Co., Ragland 1, 12-5-1e | ¶20 | 2390 |

## CALIFORNIA

| | | |
|---|---|---|
| LONG BEACH— | | |
| Anchor Pet. Co., No. 1 | 60 | 7610 |
| Midland Pet. Corp., No. 4 | 100 | 5130 |
| Shell Oil Co., Patton-Wilson 12 | 100 | 7301 |
| PLAYA DEL REY— | | |
| Pacific Shore Oil Co., McCarthy 4 | 600 | 6190 |
| St. Vincente Oil Co., No. 1 | 160 | 4550 |
| Union Oil Co., Townsite 4 | 350 | 5800 |
| SANTA FE SPRINGS— | | |
| The Texas Co., Steinly 5 | 25 | 7930 |

## KANSAS

| | | |
|---|---|---|
| COWLEY COUNTY— | | |
| Roth and Faurot, Smiley 1, se c nw 12-32-4e | 250 | 2565 |
| HARVEY COUNTY— | | |
| Jones and Shell, Lehman 1, c nw nw 36-22-2w | * | 3032 |
| McPHERSON COUNTY— | | |
| Olsen and Shell, Russell 1, c se se 3-19-2w | ¶10 | 2927 |
| Lario O&G and Shell, Boal 1, se c nw 24-19-2w | ¶4½ | 2912 |
| Joe Rush et al, Johnson 1, c se nw 10-19-2w | ¶13 | 2928 |
| Dieter and Shell et al, Sellers 1, se sw sw 19-19-1w | 1320 | 3412 |
| RUSSELL COUNTY— | | |
| Keys Pet. Co., Mills 13, sw c se 33-13-15w | 25 | 3065 |

## OKLAHOMA

| | | |
|---|---|---|
| CARTER COUNTY— | | |
| Carter Oil Co., Hooks 2, ne se ne 24-1s-3w | 1600 | 1842 |
| JEFFERSON COUNTY— | | |
| C. D. Chenault, Grover 1, cwl sw 24-7s-6w | * | 1824 |
| MARSHALL COUNTY— | | |
| Magnolia Pet. Co., Coatsworth 3, nw c se se se 30-5s-6e | 15 | 598 |
| McINTOSH COUNTY— | | |
| J. S. Routt et al, Eckols 1, sw se se 10-11-15e | ¶3 | 1011 |
| MUSKOGEE COUNTY— | | |
| Braman Oil Co., Jackson 2, sw c nw 17-13-16e | ¶3¼ | 503 |
| Collins 1, c nw se 17-13-16e | * | 2183 |
| OKFUSKEE COUNTY— | | |
| J. L. Selby, Alexander 5, cel nw ne 9-12-11e | * | 2670 |
| OKLAHOMA COUNTY— | | |
| Phillips Pet. Co., Damewood 1, sw c ne ne 3-11-3w | 8980 | 6262 |
| Phillips Pet Co. et al, Cream 1, se c ne 3-11-3w | 5205 | 6261 |
| Phillips Pet. Co., Winstead 1, sw c se ne sw 10-11-3w | 3700 | 6452 |
| Franco-Dominion, Ltd., Eckroat 1, sw c nw se nw 10-11-3w | 6315 | 6330 |
| Denver Prod. & Ref. and Plains Pet. Co., Hatfield 1, csl nw 10-11-3w | 8545 | 6355 |
| Slick Estate, Blevins 1, cnl nw nw ne 10-11-3w | 6195 | 6265 |
| I. T. I. O. et al, Lemmon 3, c ne sw se 11-11-3w | 2410 | 6240 |
| Ferguson 1, cnl nw nw nw 23-11-3w | 1215 | 6576 |
| OKMULGEE COUNTY— | | |
| Whitcomb et al, Harris 5, nw c ne ne 1-14-14e | * | 1200 |
| POTTAWATOMIE COUNTY— | | |
| J. E. Crosbie, Brown 1, ne nw sw 3-9-4e | * | 4593 |
| SEMINOLE COUNTY— | | |
| Deep Rock Oil Co., Douglas 2, ne sw ne 30-8-8e | 65 | 3925 |
| Magnolia Pet. Co., Reed 1, ne nw ne 26-5-7e | * | 2647 |

## EASTERN STATES

### PENNSYLVANIA

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| BRADFORD FIELD— | | |
| South Penn Oil Co., Farm 4503 tr (3 wells) | 6 | .... |
| Alice Freeman, Fee 15 | 5 | .... |
| Cora M. Simon, Corwin 20 | 7 | .... |
| F. M. Boocks, Boocks 19 | 2 | .... |
| TIOGA COUNTY— | | |
| Lamoka Power Corp., Bigelow 1 | ¶4½ | .... |
| Penn-Ohio Gas Co., Close 1 | ¶20 | .... |
| J. C. Trees, Farr 1 | ¶12 | .... |
| Belmont Quadrangle Co., Sproule 1 | ¶5½ | .... |
| BUTLER COUNTY— | | |
| Ingold & Ruby, Hockenberry 20 | * | .... |
| Baird, Larkin & Co., Showalter 2 | * | .... |
| Thomas & Co., Whitmier 1 | * | .... |
| CLARION-VENANGO COUNTIES— | | |
| Braunschwiger & Co., McFadden 21 | 2 | .... |
| Fryburg Motor Co., Kapp 3 | ¶1 | .... |
| Slaughenhaup & Buck, Fee 1 | 2 | .... |
| H. B. Melat, Melat 2 | * | .... |
| Kaspy Oil Co., Lands 7 | 3 | .... |
| CENTER-MIDDLE FIELD— | | |
| T. H. Kervin, Barry 9 | 4 | .... |

### NEW YORK

| | | |
|---|---|---|
| ALLEGANY COUNTY— | | |
| N. V. V. Franchot, Herbel & Co. 20 | 5 | .... |
| F. C. Shaner & Co., Coast 17 | 2 | .... |

### WEST VIRGINIA

| | | |
|---|---|---|
| KANAWHA COUNTY— | | |
| Quincy Coal Co., Huntington Development Co. 37 | ¶½ | .... |
| Fee 20 | ¶½ | .... |
| Winifrede Gas Co., Fee 12 | ¶¼ | 1791 |
| DODDRIDGE COUNTY— | | |
| Travis Bros., Spencer 1 | ¶½ | .... |
| WAYNE COUNTY— | | |
| W. P. Floyd, Start 1 | * | 2689 |
| HARRISON COUNTY— | | |
| Reserve Gas Co., Shinn 1 | ¶¼ | 3116 |
| FAYETTE COUNTY— | | |
| Montgomery Gas Co., New River Colliery 9 | * | 2503 |
| RITCHIE COUNTY— | | |
| Fannie McCullough & Co., Fee 1 | * | .... |
| Continental Oil Co., Mason 2 | * | .... |
| Morris & Co., Weekley 1 | * | .... |
| LINCOLN COUNTY— | | |
| Wilkerson & Black, Mullins 1 | * | .... |
| Martin Gas Co., Bias Hrs. 1 | ¶½ | .... |
| Allegheny Gas Co., Stowers 4 | ¶½ | .... |

### SOUTHEASTERN OHIO

| | | |
|---|---|---|
| WASHINGTON COUNTY— | | |
| Twin Oak Oil Co., Lauer 12 | * | 328 |
| MORGAN COUNTY— | | |
| Whitener & Co., Starrett 6 | 2 | 213 |
| Malta Oil & Gas Co., Clark 4 | ¶¼ | 1453 |
| The Kemrow Co., Boyd 1 | ¶1 | 793 |
| Williams Bros. Geddes 8 | * | 1086 |

### CENTRAL OHIO

| | | |
|---|---|---|
| MUSKINGUM COUNTY— | | |
| The Preston Oil Co., Leasure 1 | 172 | 3291 |
| Wittmer Prop. Trus., Riley 1 | * | 4481 |
| The Atha Co., Corbin & Co. 1 | ¶2 | 3905 |
| LORAIN COUNTY— | | |
| Dillon & McFrederick, Gilpin 2 | ¶1¼ | 2669 |
| Ohio Fuel Gas Co., Lehman 1 | * | .... |
| WAYNE COUNTY— | | |
| Ditch & Co., Sherrick 3 | ¶¼ | 511 |
| HOCKING COUNTY— | | |
| John Norris & Co., Campbell 1 | 5 | 2860 |
| ATHENS COUNTY— | | |
| A. H. Heisey Gas Co., Chase 1 | * | 1479 |

### NORTHWESTERN OHIO

| | | |
|---|---|---|
| HARDIN COUNTY— | | |
| Pleasant Oil & Gas Co., Burinson 4 | ¶¼ | 1365 |
| CRAWFORD COUNTY— | | |
| Tiro Oil & Gas Co., Baker 1 | * | 787 |

### ILLINOIS

| | | |
|---|---|---|
| WABASH COUNTY— | | |
| Robinson Oil Co., Shaffer 2 | 3 | 1502 |
| MONROE COUNTY— | | |
| T. J. Collins, Offerman 1 | * | 824 |
| ST. CLAIR COUNTY— | | |
| C. H. Bayliss & Co., Sparks 1 | * | 2005 |

### MISSOURI

| | | |
|---|---|---|
| ST. LOUIS COUNTY— | | |
| St. Elco Oil & Dev. Co., Culli 1 | * | 2755 |

### KENTUCKY

| | | |
|---|---|---|
| DAVIESS COUNTY— | | |
| C. E. Daugherty, Salmon 2 | ¶½ | .... |
| HANCOCK COUNTY— | | |
| Olean Petroleum Co., Crowe 3 | 80 | .... |
| McLEAN COUNTY— | | |
| Pampas Oil & Gas Co., Atherton 1 | 10 | .... |
| Atherton 2 | * | .... |
| HART COUNTY— | | |
| Pearson Petroleum Co., Rowntree 1 | * | 754 |
| Unknown Parties, Gaines 1 | 100 | .... |
| Mayfield 1 | ¶½ | .... |
| Bell 1 | ¶½ | .... |
| Lester 1 | ¶¼ | .... |
| Sturgeon & Co. 1 | ¶1 | .... |
| Walton 1 | ¶½ | .... |
| Near Hinesdale 1 | ¶1½ | .... |
| Barlow 1 | ¶½ | .... |
| Vaughn 2 | ¶½ | .... |
| Vaughn 1 | * | .... |
| Cook 1 and 2 | * | .... |
| Robinson 1 | * | .... |
| Near Hinesdale 1 and 2 | * | .... |
| West of Bonneville 1 | * | .... |
| Lawler 1 | * | .... |
| Stimson 1 | * | .... |
| Sweet 1 | * | .... |
| Wilkerson 1 | * | .... |

## TEXAS

### NORTH TEXAS

| | | |
|---|---|---|
| ARCHER COUNTY— | | |
| John Dixon et al, Knight & Hines 1 | * | 1350 |
| F. P. Hynes et al, J. Richardson 2-B | * | 1205 |
| Petroleum Producers Co. et al, Richardson 1 | * | 1267 |
| THROCKMORTON COUNTY— | | |
| Swain & Holcomb, Morrison 1 | * | 540 |
| NORTH YOUNG COUNTY— | | |
| Ard & Panhandle Ref. Co., Jeffery 1 | * | 825 |
| Clover & Ross, Leberman 1 | * | 1077 |
| H. D. Davis et al, Stratton 1 | * | 557 |
| W. H. Dyer et al, J. F. Barnett 1 | * | 770 |
| Lee Flowers et al, Furr 1 | * | 1072 |
| S. B. Glover et al, L. R. Drum 1 | * | 505 |
| W. F. Hamilton et al, Finch 10 | 250 | 657 |
| Jas. McKanna & The Texas Co., Jeffery 5-B | 215 | 731 |
| W. H. Peckham et al, Howard 1 | * | 953 |
| R. J. Watson et al, Terrell 1 | * | 702 |
| J. F. West et al, F. L. Miles 1 | * | 952 |

### TEXAS PANHANDLE

| | | |
|---|---|---|
| GRAY COUNTY— | | |
| Kewanee O&G Co., J. S. Morse 1-D | 155 | 2528 |
| J. S. Morse 1-E | 325 | 2505 |
| R. E. Smith 3 | 420 | 3282 |
| McIlroy Oil Co., C. Baer 1 | 185 | 3253 |
| W. A. Scott et al, Cobb 1 | ¶20 | 3380 |
| Wilcox O&G Co., Coombs-Worley 20 | ¶8-75 | 2995 |

### WEST TEXAS

| | | |
|---|---|---|
| IRION COUNTY— | | |
| Chas. Denny & W. R. Andrews, Tankersley 1 | 15 | 1373 |
| LOVING COUNTY— | | |
| H. Lockhart et al, F. W. Hubbard 1 | * | 4220 |
| PECOS COUNTY— | | |
| Magnolia Pet. Co., Eaton 1 | 15 | 1618 |
| WINKLER COUNTY— | | |
| Magnolia Pet. Co., J. B. Walton 1 | 55 | 3155 |

(Continued on page 87)

# Permits Granted for New Wells

▼ ▼ ▼

*For Tabulation and Comparison See Market Section*

## CALIFORNIA

TORRANCE—Hermosa Exploration Co., No. 1, 6-4-14.

LONG BEACH—Dabney Johnson Oil Corp., No. 75, 13-4-13.

PLAYA DEL REY—Donley McKeon, No. 1, 28-2-15.

HUNTINGTON BEACH—W. F. Baldwin Oil Co., No. 1 Golden Star, 2-6-11.

CAPITAN—El Capitan Oil Co., No. 173-1, 5-4-30.

LOS ANGELES COUNTY—York-Smullin Oil Co., No. 1, 29-4-13. Huntington Central Oil Co., No. 1, 34-1-11.

ALAMEDA COUNTY—A. M. Gilstrap, No. 1, 15-3-3.

SANTA BARBAR COUNTY—Palisades Pet. Corp., No. 3 Meigs, 28-4-27.

KINGS COUNTY—Irma Investment Corp., No. 1 Watson, 7-23-20.

ELWOOD—Joe Ferring, No. 1, 10-4-29.

KERN COUNTY—F. B. Langstroth, Cumberland 1, 16-26-18. Cumberland Oil Co., Cumberland 1, 16-26-18.

KETTLEMAN HILLS—Pacific Western Oil Co., No. 14, 28-21-17.

LAWNDALE—Ingalls Oil Co., No. 1, 20-3-14.

LONG BEACH—Allied Pet. Corp., Garrison 4, 19-4-12. McKeon Oil Co., No. 10, 30-4-12.

MT. POSO—General Pet. Corp., Heisen 29, 16-27-28.

PLAYA DEL REY—Wedol Pet. Co., No. 1, 28-2-15.

TORRANCE—E. S. Cone, Kellogg and Burdick 1, 6-4-14.

## KANSAS

BUTLER COUNTY—Blaksley and Wentz, Holliday 2, sw sw ne 24-27-4e.

COWLEY COUNTY—Roth and Faurot, Holt 4 (owd) nw c se 12-32-4e; Lewis Prod. Co., Stark 1, se ne sw 19-34-7e.

McPHERSON COUNTY — Foraker et al, Tinsley 1, nw c sw sw 5-20-1w.

RENO COUNTY — Study, Turner et al, Goering 1, se ne nw 1-23-4w.

## LOUISIANA

BOSSIER PARISH—W. N. Hankins, Shreveport, Newell 1, 12-19n-11w, 300 ft s and 200 ft w of ne cor of sec.

CALCASIEU PARISH — Freeport Oil Co., Freeport, Vinton Dome 3, 33-10s-12w, 580 ft w and 250 ft s of ne cor sw¼ of se¼. J. H. Thames. Sulphur, La., John Hewett 1, 11-9s-10w, 90 ft w and 90 ft n of se cor of sec. Vinton Petroleum Co., Ged, La., M. Gray 20 Acres 11, 33-10s-12w, 608 ft n of s line and 195 ft w of e line sw¼ of ne¼.

RICHLAND PARISH—United Carbon Co., Monroe, La., Mann 1, 12-16n-5e, 1320 ft s and 1921 ft w of ne cor of sec.

SABINE PARISH—H. Alvord, Jr., Shreveport, Sabine Lbr. 2, 1-7n-12w, 330 ft s and 250 ft e of nw cor sw¼ of ne¼. Jno. Henry Oil & Gas Co., Pleasant Hill, La., Cook Land Co. 3, 33-10n-12w, 330 ft n and 330 ft w of sw¼ of ne¼.

## OKLAHOMA

CREEK COUNTY—Wilrough Oil Co., Stewart 1, cwl sw nw ne 32-17-12e; Murta et al, Wilson 4, sw c nw se nw 32-17-12e; Pioneer Petroleum Co., Bucktrot 15, se c ne 24-17-10e; W. H. Whittington et al, Char-Co-Te-tana 1, ne c nw ne 9-17-10e; Magnolia Pet. Co., Boone 4, (owd) se c sw se 34-17-7e.

GRADY COUNTY—Oklahoma Gas Utilities Co., Tidley 2, se ne se 26-4n-8w.

MARSHALL COUNTY—Industrial Oil Co., Sharp 1, n ec se ne 17-6s-5e; Poor Boy Oil Co., Null 2, nw c sw sw ne 24-5s-5e.

MUSKOGEE COUNTY—P. P. Boyle et al, Barnett 1, nw c se nw 35-16-15e; Newhoma Pet. Co., Lyons 1, ne c sw 26-14-17e; Braman Oil Co., Jackson 3, sw c nw 17-13-16e.

OKLAHOMA COUNTY — Jamison-Grimes, Inc., Fee 1, nw c sw se 34-12-3w; Slick Estate, Classen-Edwards 2, cwl e½ se sw 3-11-3w; Slick Estate, Classen-Edwards 3, c ne se sw, 3-11-3w; Slick Estate, Classen-Edwards 4, c e½ e½ sw, 3-11-3w; Slick Estate, Classen-Edwards 5, se c sw se sw 3-11-3w; Phillips Pet. Co., Qualls 1, cwl sw ne sw 10-11-3w; Phillips Pet. Co., Corbett 1, ne c se nw sw 10-11-3w; Phillips Pet. Co., Leverish 1, cnl s½ se sw 10-11-3w; Westgate Oil Co., Grace 1, csl n½ n½ nw 10-11-3w; Mid-Texas Oil Co., Buxton 1, sw c ne nw 3-11-3w; Phillips Pet. Co., Perry 1, cnl sw 10-11-3w; Baskin Oil Co., Riverbed 1, se c ne nw nw 2-11-3w.

OKMULGEE COUNTY—The Texas Co., Meyers 1, cwl sw ne 35-16-11e; Whitcomb et al, Harris 6, sw c ne ne 1-14-14e; Denton and Marshall, Rentie 1, se c sw se 5-14-14e.

PONTOTOC COUNTY—Edna Merrill Oil Co., Hanell 1, ne c se 29-5-8e.

SEMINOLE COUNTY—Magnolia Pet. Co., Reed 2, ne nw ne 26-5-7e (twin.)

STEPHENS COUNTY — Carter Oil Co., Florence 1, nw c ne 11-3s-6w.

TULSA—McDonald et al, Wolfe 1, (owd) se c ne 24-16-13e.

WAGONER COUNTY—A. W. Swift et al, Cousins 1, se c sw se ne 7-17-16e; L. Price et al, Barnett 1, se c ne ne ne 34-17-16e.

## TEXAS

ARCHER COUNTY — Shappel Oil Co., Wichita Falls, W. P. Ferguson, 294, 1, E. Patterson sur, 330 ft from n and 1753 ft from e line, blk 2. J. H. Wilson, Wichita Falls, J. H. White, 40, 1, blk 40, Amer. Trib. sur, 650 ft from s and e lines of lot 14.

ATASCOSA COUNTY—Tom Draper, Whitsett, A. W. Schwarz, 50, 1, B 38, Atas. Col. sur, 185 ft e of center of w line.

BEE COUNTY—Van Alex. Oil Co., Beeville, A. McFall, 100, 1, S. Morris sur, 150 ft from n and w lines.

BOWIE COUNTY—Mayfield Oil Royalties of Texas, Fort Worth, R. B. Cooper, 115, 1, Wm. Ward sur, 225 ft from n and e lines.

BROWN COUNTY—M. E. Bishop, Brownwood, B. S. Boysen, 20, 6, 604, P. Mangle sur, 690 ft from s and 460 ft from w line.

CALLAHAN COUNTY—Union Oil Co. of Nevada, Abilene, S. F. Dyer, 280, 1, 134 BBB &C sur, 1150 ft from w and 450 ft from s line sec. States Oil Corp., Eastland, M. Harris, 160, 1, S 99, BBB&C sur, 1275 ft from n and 500 ft from e line nw¼.

CASS COUNTY—C. E. Murdock, Linden, First Natl. Bank, 83, 1, E. Watson sur, 266 ft from n and 325 ft from e line.

COOKE COUNTY — Benson Bros. Bowie, L. Rohmer, 60, 1, G. M. Casey sur, 150 ft from s and e lines.

COLEMAN COUNTY — W. L. Jackson, Burkett, M. Wright, 2, 1, Burkett sur, 165 ft from n and 125 ft from w line. Canyon O&G Co., Cross Plains, E. L. Harris, 5, 1, Burkett sur, 150 ft from w and 114 ft from s line of blk 18.

CHAMBERS COUNTY—Pure Oil Co., Fort Worth, W. F. Mayes, 604, 13, BBB&C No. 4 sur, 200 ft ne of No. 1.

DUVAL COUNTY—O'Byrne & Bailey, San Antonio, A. Weil, 640, 1, S 658, 330 ft from sw and se lines.

FALLS COUNTY—A. T. Eddingston, Port Arthur, R. Llewellyn, 150, 3, Geo. Allen sur, 350 ft sw of No. 2.

GREGG COUNTY — Flanagan Prod. Co., Longview, A. J. Green, 20, 1, G. W. Hooper sur, 150 ft from s and e lines. A. H. Gibson, Tulsa, H. C. Alexander, 46, 1, M. Van Winkle sur, 250 ft from w and 203 ft from s line. Lauck & Dickens, Monna, Ark., M. E. Anderson, 2, 1, M. Van Winkle sur, nw corner. Tidal Oil Co., Fort Worth, A. A. Castleberry, 102, 1, Wm. Robinson sur, 250 ft from s and w lines. Danciger O&R Co., Amarillo, E. G. Barrett, 171, A1, S (Gray County). Mid-Kansas O&G Co., Tulsa, J. J. Castleberry, 202, 1, D. Sanchez sur, 150 ft from s and w lines. W. L. Wollett, Waco, W. M. Harley, 10, 1, W. M. Robinson sur, 150 ft from e and 180 ft from n line. Mid-Kansas O&G Co., Tulsa, E. M. Nettleton, 100, 1, J. Ruddle sur, 150 ft from s and e lines. H. P. Key, Gladewater, J. A. King, 7½, 1, W. P. Chisum sur, 213 ft from n and 150 ft from w line.

GOLIAD COUNTY—T. B. Slick Estate, San Antonio, W. H. Riedel, 588, 1, H. Smith sur, 330 ft from e and 990 ft from s line.

GRAY COUNTY —Danciger O&R Co., Amarillo, E. G. Barrett, 171, A1, S 128, B 3, I&GN sur, nw cor of s½ of ne¼; B1, same sur, sw cor of n½ of ne¼.

HARDIN COUNTY—Rio Bravo Oil Co., Houston, Fee, 158, C112A, J. F. Cotton sur, 200 ft n of No. 111A.

HARRIS COUNTY — Humble O&R Co., Houston, Minnetex, 6, W. J. Lovett sur, 4028 ft from n and 270 ft from e line of lot 254.

JACK COUNTY—Magnolia Pet. Co., Dallas, M. B. Cook, 105, 1, Jas. Young sur, 330 ft from s and e lines.

LOVING COUNTY—Erven & Mahres Dev. Co., Pecos, L. E. Thorp, 80, 1, S 46, B 53, T&P sur, 2310 ft from e and 330 ft from s line sec. California Co., Midland, J. G. Allen, 480, 3, S 90, B 1, W&NW sur, 2183 ft from s and 2191 ft from w line of sec; 4, same sur, 3113 ft from s and 3121 ft from w line of sec. Lockhart & Co., Pecos, Bell, 1, S 91, B 1, W&NW sur, 1721 ft from ne and 410 ft from se line of sec. Sudderth & James, Pecos, Capitol, 40, 1, S 74, H&TC sur, ne cor. P. L. Hoffman, Cisco, Wheat, 160, 2, S 83, W&NW sur, 330 ft from s and w line sw¼ of sw¼.

MOORE COUNTY— Texas Co., Wichita Falls, D. C. Jester, 160, 1, S 14, B 6T, T&NO sur, center of sw¼.

MARION COUNTY—E. W. Jones, Dallas, E. M. Johnson, 1018, 1, Wm. Mason sur, 2030 ft from n and 200 ft from e line of sur.

ORANGE COUNTY—Jefferson Prod. Co., Beaumont, J. Bland, 30, 1, Jas. Dyson sur, 586 ft from e and 50 ft from s line.

PANOLA COUNTY—Everts Drilling Co., Wichita Falls, E. L. McDaniel, 50, 2, A. Barr sur, 200 ft n of No. 1.

PALO PINTO COUNTY—Linderman Bros., Graham, A. W. Johnson, 250 1, S 1, S. Latham sur, 1880 ft from e and 580 ft from s line.

PECOS COUNTY—Cardinal Oil Co., San Angelo, J. H. Tippett, E, 160, 7, S 40, B 194, GC&SF sur, 150 ft from s and e line of w½; 7, same sur, 650 ft from s and 150 ft from e line. S. C. Yingling, Fort Worth, J. H. Tippett, 120, 2, S 40, B 194, GC&SF sur, 150 ft from w and 635 ft from s line se¼.

RUSK COUNTY—Thomason & Fitzsimmons, Shreveport, E. B. Alford, 5, 1, I. G. Parker sur, 171 ft from w and 150 ft from s line. H. L. Hunt, Henderson, A. B. Finney, 32, 1, R. H. Penny sur, 200 ft from n and 150 ft from e line. J. S. Rushing, El Dorado, Ark., G. Thompson, 10, 1, R. E. Winn sur, 150 ft s of center of n line. Upchurch & Allen, Tyler, Brightwell, 10, 1, R. E. Winn sur, 150 ft from n and w lines. Houston Oil Co., Houston, J. M. Crim, 16½, A2, R. E. Winn sur, 150 ft from n and 290 ft from e line. W. Brightwell, 20, 1, R. E. Winn sur, 150 ft from n and e lines; 2, same sur, 150 ft from s and e lines. D. M. Peterson, 36, 3, I. Ruddle sur, 150 ft from n and e lines. Petroleum Marketing

Corp., Houston, A. J. Deason, 12, 2, M. J. Pru sur, 150 ft w of center of e line; 3, same sur, 300 ft w of No. 2. Federated Oil Co., Wichita Falls, B. F. Laird, 57, 2, I. Ruddle sur, 250 ft from n and e lines. Cordova-Union Oil Co., Fort Worth, C. O. Christian, 36, 4, R. E. Winn sur, 150 ft from n and e lines. Gulf Prod. Co., Houston, R. M. Griffin, 51, 4, I. Ruddle sur, 611 ft from w and 150 ft from w line. Gilcrease Oil Co., Tulsa, Okla., D. Bradford, 40, 1, J. Ximinez sur, 150 ft from n and w lines; 3, same sur, 549 ft s of No. 1. Shaw Oil Co., Wichita Falls, Deason, 10, 1, M. J. Pru sur, 150 ft from n and w lines. Magnolia Pet. Co., Dallas, B. Laird, 82, 3, W. P. Chisum sur, 150 ft from n and w lines. D. Crim, 50, 7, R. E. Winn sur, 425 ft s of No. 4. Devonian Oil Co., Tulsa, R. A. Motley, 442, 1, Wm. Killen sur, 330 ft from s and w lines. H. L. Hunt, Henderson, W. M. Camp, 6, 1, J. Ximinez sur, 150 ft from n and 177 ft from w line of blk 9. C. Young, 125, 1, M. J. Pru sur, 150 ft from n and e lines. Humble O&R Co., Houston, J. N. Peterson, 12, 3, I. Ruddle sur, 489 ft from s and 150 ft from e line. Hill, Hill & Brown, Fort Worth, J. N. Peterson, 40, 1, I. Ruddle sur, 150 ft from n and e lines. Olsan Bros, Henderson, J. T. Brown, 32, 3, M. J. Pru sur, 150 ft from sw and 300 ft from nw line; 4, same sur, 300 ft from n and w lines. Peery, Woody & Beller, Wichita Falls, A. Thrash, 31, 3, J. Ximinez sur, 210 ft from w and 200 ft from n line; 4, same sur, 150 ft from s and e lines. Brown & Oliver, Henderson, B. F. Hindman, 23, 1, Wayne-Smith sur, 150 ft from n and e lines. Gulf Prod. Co., Houston, A. Laird, 60, 1, I. Ruddle sur, 150 ft from s and e lines. H. L. Hunt, Henderson, C. Young 9, 1, M. J. Pru sur, 150 ft from n and e lines. Snowden-McSweeney Co., Fort Worth, R. H. Laird, 133, 2, Chisum-Ruddle sur, 150 ft from n and e lines. K & M Oil Co., San Antonio, L. Toliver, 3, 1, 150 ft from s and w lines. C. W. Porter et al, Longview, D. Ladd, 5, 1, H. Hobson sur, 152 ft from n and 150 ft from w line. Humble O&R Co., Houston, J. N. Peterson, 12, 1. I, Ruddle sur, north corner. Magnolia Pet. Co., Dallas, B. Laird, 82, 3, I. Ruddle sur, center. Snowden-McSweeney Co., Fort Worth, R. H. Laird, 133, 1, Chisum-Ruddle sur, 179 ft from e and 100 ft from s line. Gulf Prod. Co., Houston, W. L. Laird, 1, I. Ruddle sur, 200 ft from ne and 100 ft from se line. Humble O&R Co., Houston, L. D. Crim, 528, 13, E. G. Sevier sur, 209 ft from e and 365 ft from s line. Babcock Bros., Denison, W. M. Camp, 4, 2, J. Ximinez sur, 216 ft s of No. 1; 1, same sur, ne corner. Hill, Hill & Brown, Fort Worth, J. N. Peterson, 40, 1, I. Ruddle sur, 150 ft from n and e lines. Marine Corp., Dallas, L. D. Crim, 30, 1, W. P. Chisum sur, 150 ft from s and e lines. N. K. Bean, 50, 2, I. Ruddle sur, 150 ft from n and w lines. E. B. Madden, Olney, M. Mayfield, 40, 1, D. Clark sur, 250 ft from n and 150 ft from w line.

SHACKELFORD COUNTY—A. C. Walker, Albany, L. C. Huskey, 80, 17, 529, TE&L sur, 450 ft from w and 216 ft from s line. Mack Hays, Albany, J. H. Nail, 140, 1, S 157, E. T. Ry sur, 150 ft from n and w lines of se¼. Dickey Bros., Albany, E. Webb, 320, 3, TE&L sur, 1800 ft from nw and 890 ft from ne line.

SMITH COUNTY—G. V. Lewis, Arp, S. S. Cook, 175, 1, Jas. Jordan sur, 150 ft from s and e lines.

STARR COUNTY—B. B. Tips, Kennedy, F. Dayno, 314, 1, No. 77A, Por. 81, 100 ft from s and 550 ft from e line lot 1.

TRAVIS COUNTY—Taylor Prod. Co. and Fuchs, Taylor, A. F. Smith, 30, 1, L. Kimbro sur, 160 ft from n and 470 ft from w line. Conway Ratliff, Austin, J. Jones, 195, 1, A. Alexander sur, 156 ft from w and 320 ft from s line.

UPTON COUNTY—Baldwin et al, San Angelo, J. F. Lane, 80, 1, S 36, B 1, MK&T sur, 330 ft from s and w line e½ nw ¼. Weekley Oil Corp., Fort Worth, McClintic, B, 160, 1, S 206, B F, CCSD&RGNG 330 ft from e and 1650 ft from s line of sec.

VAN ZANDT COUNTY — Pure Oil Co., Fort Worth, H. C. Gilbert, 62, 2, M. Gross sur, 200 ft from w and 1003 ft from s line.

WICHITA COUNTY — T. F. Hunter, Wichita Falls, Amer. Refg., 5, M. J. Sharp sur, 150 ft from s and w lines. Mrs. W. C. Witcher, Wichita Falls, G. P. Woodruff, 80, 1, No. 269, Wag. Col., 150 ft from s and e lines. Texas Co., Wichita Falls, W. T. Waggoner, A, 398, S 4, GC&SF sur, 660 ft e of No. 394; 397, same sur, 250 ft from w and 50 ft from s line.

WARD COUNTY—M. R. Hankinson et al, Monahans, A. Emery, 20, 1, S 26, B 5, H&TC sur, 2190 ft from nw and 510 ft from sw line sec. Bell & Weir, Fort Stockton, J. H. Boogher, 6, 1, S 11, B 5, Grand Falls sur, 150 ft from n and w line blk 8; 2, same sur, 150 ft from s and e lines of blk 8. Central Gas Co., Fort Worth, L. Munroe, 80, 1, J. W. Jackson sur, 330 ft from w and 1863 ft from s line.

WEBB COUNTY—Cole Pet. Co., Laredo, D. Benavides, 640, 2, S 1601, GC&SF sur, 2480 ft from e and 160 ft from s line sec.

WHEELER COUNTY — Fain-McGaha Oil Corp. and Murchison Oil Co., Wichita Falls, O. Close, 320, S 78, B 23, H&GN sur, center of nw¼.

WILSON COUNTY—A. M. Blume, Floresville, O. B. Nickelson, 77, 1, C. Diaz sur.

YOUNG COUNTY—E. D. Willis et al, Jean, T. J. Routon, 40, 5, 22, TE&L sur, 500 ft from n and 450 ft from w line. McClung & Dawson, Cisco, G. N. Hunter, 80, 1, 290, TE&L sur, 150 ft from s and e lines. A. B. Bissey, Albany, Barnett, 60, 1, 2245, TE&L sur, 150 ft from n and 1866 ft from w line. King Royalty Co., Wichita Falls, J. F. Larimore, 160, 18, 2246, TE&L sur, 450 ft from e and 766 ft from n line; 19, same sur, 450 ft from e and 1066 ft from n line. Wooten & Reed et al's Graham, A. E. Robinson, 60, 2, 1467, TE&L sur, 150 ft from s and e lines of sec. Victor Swanson et al, Olney, S. T. Moreland, 80, 1, 1485, TE&L sur, 1700 ft from n and 175 ft from e line. W. H. Junker et al, Olney, O. H. Rathman, 80, 1, 401, TE&L sur, 483 ft from n and 150 ft from e line. D. L. Wolf, Olney, C. E. Howard, 80, 1, 246, TE&L sur, 150 ft from w and 490 ft from s line. P. K. Deats, Graham, Jeffrey, 40, 1, 52, TE&L sur, 750 ft from n and 150 ft from w line. Taylor & Dillon, Cisco, J. M. Nall, 100, 1, 1997, TE&L sur, 150 ft from e and 700 ft from s line. O. L. Swanson, Olney, N. Humphrey, 100, 1, 760, TE&L sur, 150 ft from n and w lines. L. D. Loofburrow Co., Wichita Falls, W. J. Bozo, 160, 1, 354, TE&L sur, 300 ft from n and 1100 ft from e line.

# COMPLETIONS

(*Continued from page 85*)

## CENTRAL EAST TEXAS

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| **GREGG COUNTY—** | | |
| Arkansas Fuel Oil Co. & Yount-Lee Oil Co., Lathrop 3-A | 15,000 | 3605 |
| Arkansas Fuel Oil Co., F. K. Lathrop 1-B | 12,000 | 3608 |
| W. L. Brandon-Geo. McCamey et al, Richards 1 | * | 3574 |
| Earnest E. Eslick & Little, Spring Hill Church Lot 1 | 12,000 | 3624 |
| Hunter-Rowe et al, J. B. Watson 1 | 15,000 | 3637 |
| J. R. Travis et al, A. G. Morton 1 | * | 3571 |
| **RUSK COUNTY—** | | |
| Geo. S. Anderson et al, Wm. Jobe 1 | 4500 | 3727 |
| Burton Drilling Co., Geo. Thompson 1 | 7500 | 3705 |
| DeMontrand & Geo. B. Ray, J. A. Birdwell 1 | 15,000 | 3620 |
| Federated Oil Co., W. M. Camp 2 | 3750 | 3665 |
| Haynes Drilling Co., J. T. Brown 4 | 1000 | 3714 |
| Humble O&R Co., L. D. Crim 9 | 15,000 | 3725 |
| Peterson 2 | 20,000 | 3770 |
| Peterson 4 | 15,000 | 3760 |
| H. L. Hunt et al, Claude Ashby 5 | 400 | 3612 |
| C. M. Joiner et al, H. Brooks 1 | 3000 | 3705 |
| Ed. M. Jones-Houston Oil Co., Crim 2 | 12,000 | 3718 |
| John E. Mabee, Inc., Thrash 2 | 3000 | 3696 |
| Magnolia Pet. Co., Ben Laird 1 | 20,000 | 3587 |
| McMillan-Rush et al, W. B. Thompson 1 | 12,000 | 3707 |
| Petroleum Marketing Corp., Arnold-Goodwin 1 | * | 2761 |
| Sinclair O&G Co., W. W. Holland 6 | 750 | 3710 |
| Turman Oil Co., Deason 1 | 3000 | 3696 |
| Deason 2 | 3200 | 3699 |
| Westexas Oil & Roy. Corp., Talley 1 | 2500 | 3587 |
| **SMITH COUNTY—** | | |
| Guy V. Lewis et al, S. S. Cook 1 | 15,000 | 3696 |
| **VAN ZANDT COUNTY—** | | |
| Geo. S. Anderson & E. E. Fogelson, Sanger (strip) 2 | 5000 | 2853 |
| Pure Oil Co., R. E. Cade 3 | 2500 | 2958 |
| W. T. Jarman 7 | 7500 | 2950 |
| Ella York (39.6-ac) 4 | 6000 | 2925 |

## SOUTH TEXAS

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| **DUVAL COUNTY—** | | |
| SR & C Vacuum Oil Co.'s Duval County Land Co. 4 | 550 | 1733 |
| Mag. Pet. Co.'s Wilson 2 | 500 | 2377 |
| **GUADALUPE COUNTY—** | | |
| Sun Oil Co.'s Knoblock 14 | 750 | 2570 |
| Simms Oil Co.'s Manford 5 | * | 2671 |
| **LIVE OAK COUNTY—** | | |
| Houston Oil Co.'s Brown Land & Cattle Co. 3 | * | 5573 |
| **NUECES COUNTY—** | | |
| Houston Oil Co.'s Rand Morgan 1 | ¶35-40 | 4093 |
| H. H. Weinert's Mohle 1 | * | 5408 |
| **REFUGIO COUNTY—** | | |
| Moody Seagraves O'Conner 7 | ¶15-80 | 6449 |
| United Prod. Co.'s Power 3 (dd) | 300 | 6461 |
| **ZAPATA COUNTY—** | | |
| O. W. Killam's Killam 4 | * | 2946 |
| B. F. Nixon's Gutierrez 1 | * | 37 |
| S. T. Phelps, Trustee's, Garza 2 | * | 1956 |

## TEXAS GULF COAST

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| **ALLEN DOME—** | | |
| Mills Bennett Prod. Co., Randon 2 | * | 5308 |
| **BARBERS HILL—** | | |
| Mills Bennett Prod. Co., Barber 1-B | 130 | 5320 |
| Yount-Lee Oil Co .,Winfree 1 | 1200 | 5495 |
| Chambers County A. A. 18 | 690 | 4465 |
| **GAY HILL—** | | |
| Sun Oil Co., Witt 6 | 180 | 1244 |
| Caraway 5 | 125 | 1322 |
| **GRIMES COUNTY—** | | |
| Wainwright-West & Triangle Corp., Templeman 1 | * | 4563 |
| **HUMBLE—** | | |
| Trapshooter Reilly, O'Neil 1 | * | 1806 |
| Sun Oil Co., Bender 21 | 1480 | 4212 |
| M. LaRue, Tuffly 1 | * | 1405 |
| **MADISON COUNTY—** | | |
| Peddy et al, Hibbit 1 | * | 1740 |
| **MANVEL—** | | |
| The Texas Co., Ewing 1 | ¶25-35 | 7590 |
| **MOSS BLUFF—** | | |
| Texas Gulf Sulphur Co., Carter 3 | * | 1120 |
| **RACCOON BEND—** | | |
| Humble O&R Co., E. Grawunder 3-A | ¶10 | 961 |
| Hardy 3-B | * | 3257 |
| Mitchell 1-C | * | 3474 |
| Reese 1-B | * | 4531 |
| Sanders 6 | * | 3484 |
| Sherrod 4 | * | 3295 |
| Urban 7 | * | 1165 |
| Woodley 10 | * | 3400 |
| **WHARTON COUNTY—** | | |
| H. H. Givan, Hudgins 2 | * | 1347 |

## LOUISIANA GULF COAST

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| **LOCKPORT—** | | |
| Vacuum-Gulf, Bordages 9 | 1600 | 6520 |
| **VINTON—** | | |
| Wilson-Broach, Wilson 8 | 200 | 3140 |

## NORTH LOUISIANA

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| **BOSSIER PARISH—** | | |
| Delaware La. Dev. Co., Bolinger 1, 38-23-11 | * | 3217 |
| United Gas Pub. Serv. Co., Smith A-1, 14-17-12 | ¶2½ | 2488 |
| **RICHLAND PARISH—** | | |
| Southern Carbon Co., C. M. Noble 1, 37-15-6e | * | 2495 |

# Wildcat Reports From All Sections

## CENTRAL EAST TEXAS

Company, Well and Location — Initial Production Bbls. — Depth

LIMESTONE COUNTY—
R. H. Dearing & Sons-Imperator Oil Corp., B. B. Baron 1 ..... * 3169

BOWIE COUNTY—Devore & Midfield Co.'s R. B. Cooper 1, W. M. Ward sur, dr 750 ft. Parkington & Jones et al's W. W. Whybark 1, J. H. Dyer sur, dk. Maud Redwater Oil Co.'s Merritt 1, Y. S. McKinney sur, dr 955 ft. Lee Timberlake et al's Tidwell 2, L. M. Rice sur, elev 290 ft, dr 1710 ft.

CASS COUNTY—S. D. Hunter et al's M. Felkner (66-ac) 1, J. L. Chambers sur, elev 248 ft, dr 1060 ft. C. E. Murdock et al's G. W. Coody-First Nat'l Bank 1, Evans Watson sur, elev 401 ft, dr 2650 ft. Olds-Smith et al's Joe Athenay 1, J. C. Byers sur, sd 1600 ft. Pigg & Davis' Ray Bryan 1, Albert Latimer sur, dk. John C. Rogers et al's W. Q. Henderson 1, Wm. Davis sur, elev 354 ft, dr 955 ft; Lanier 1, K. A. Welborn sur, elev 366 ft, sd 1920 ft. Smith-Adkisson et al's Wilson 1, Jas. Graham sur, dk. J. E. Smitherman et al's A. S. Fell 1, John Farrell sur, elev 295 ft, Pecan chalk 2405-2925 ft, dr 3585 ft.

CHEROKEE COUNTY—D. Harold Byrd et al's Fariss 1, elev 215 ft, dr 3205 ft. W. G. Gray et al's H. Kyle 1, Jas. McClain sur, lcn. McDonald Bros. et al's W. A. Newton 1, Thos. Quevedo sur, elev 309 ft, dk. Rowan-Nichols Oil Co.'s Ousley 1, T. L. Smith sur, rig. Wm. A. Stone et al's E. M. Decker 1, Geo. Ruddle League, dr 775 ft.

DELTA COUNTY — Delta Development Co.'s M. Neatherly (26-ac) 2, J. B. Alexander sur, dr 2655 ft. Everett Drilling Co. et al's M. Sansing 1, J. B. Craig sur, sd 3335 ft. D. S. Hoad et al's J. J. Baker 1, R. Carson sur, elev 437 ft, sd 1550 ft. Worthington-Stedham et al's W. H. Dejernett 1, E. Chick sur, elev 492 ft, sd 1925 ft.

FRANKLIN COUNTY—Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, sd 2770 ft.

LAMAR COUNTY—K. O. Bundy et al's G. S. Legate 1, J. V. Cheney sur, rig. Everett & Allen's J. A. Guest 1, Luke Roberts sur, sd 2200 ft. Puritan Oil Co.'s Geo. Parr 1, R. Russell sur, dk.

LEON COUNTY—Sun Oil Co.'s Ella Grayson 1, Marquette Blk., dr hard sandy-shale 2740 ft.

LIMESTONE COUNTY—R. H. Dearing & Imperator's Barron 1, abn 3169 ft, base Woodbine at 3142 ft. E. E. O'Byrne et al's S. W. Hancock 1, H. York sur, sd 1165 ft.

RAINES COUNTY—Rains County Oil Corp. (R. A. Westbrook's) Wm. Cates 1, Calvin Gage sur, top Pecan chalk 2232 ft, dr 2244 ft.

RED RIVER COUNTY—E. L. Chapman et al's Morris-Guest 1, S. Larkin sur, sd 2745 ft. Droppleman & Bundy's J. W. Cunningham 1, S. V. Chi sur, sd 2745 ft. Echols & Peters' E. Howison 1, W. Humphries sur, dk. Everett & Allen's W. F. Bryan 1, P. Vaughan sur, dk. Pierson et al's J. R. Dellahunty 1, sp and sd. Johnson Pet. Co.'s S. C. Style 1, E. M. Dean sur, dr 2345 ft.

ROCKWALL COUNTY—A. W. Walker & Son et al's M. S. Jones 1, S. Simmons sur, sd 700 ft; Paul Snow 1, J. E. Sherwood sur, sd 926 ft.

RUSK COUNTY—Dan Brooks et al's Alford 1, J. D. Reel sur, dr 2130 ft. Carolyn Oil Corp.'s E. C. Carey 1, John Piburn sur, lcn. Clark & Cowden's Mercer 1, M. A. Young sur, top Pecan chalk 2400 ft, sd 3375 ft. Devonian Oil Co. & Gulf Prod. Co.'s R. A. Motley 1, Wm. Killen sur, dr 1550 ft. Daniel & Tom C. Patten's Mercer-Crews 1, M. A. Young sur, rig. R. W. Giles (Shreveport Prod. Co.'s) Newt Orr 1, Wm. Tippett sur, dk. F. Griffith et al's F. J. Lowe 1, Wm. Williams sur, dr 2830 ft. J. S. Kimbrough et al's Wetherly 1, J. I. Sanches sur, rig. Laster Oil Co. & Miller's B. B. Gray 1, Jas. McLean sur, dk.

### ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—side-tracking; sp—spudding; sr — straight raming; std—standardizing; sw — salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

Leonard Pet. Co.'s Adams 1, S. C. George sur, Pecan chalk 2135-2730 ft, dr 2900 ft. Morefield Drlg. Co. & Head's J. Ector 1, Daniel Clark sur, top Pecan chalk 2451 ft, dr 2590 ft. Pearl Oil Co. (Paul Vitek's) Eaton 1, F. Cordova sur, Pecan chalk 2714-3090 ft, coring shale 3590 ft. Rusk County Oil Co.'s Robertson 1-A, skid rig. Nat Sadler et al's Ed. Sparks 1, Abner Nail sur, sd 1261 ft. Ward Oil Corp.-J. R. Elliott & Johnston Bros.' Thrash 1, F. Cordova sur, Pecan chalk 2764-3168 ft, top oil sand 3743 or 3747 ft, coring sand 3771 ft.

SMITH COUNTY—Big Indian Oil & Dev. Co.'s C. Mills 1, Jas. Jordan sur, elev 420 ft, rig. J. B. Bunte et al's Jarvis 1, Juan Vargas sur, rig. Howard Pet. Co.'s Lee Holt 1, Barnes Clark sur, dk. C. M. Joiner et al's W. M. Wright 1, (4 mi east Tyler) dr 1910 ft. Guy Lewis et al's S. S. Cook 1, Jas. Jordan sur, Pecan chalk 2736-3103 ft, Austin chalk 3535-3620 ft, comp. flowed 97 bbls oil first 18 minutes at 3675-3696 ft. Magnolia Pet. Co.'s J. R. Wright 1, Juan Vargus sur, dk. Owen-Sloan Oil Co.'s M. Starnes 1, Sam Epps sur, dk. Ruffin-Williams et al's H. Florence 1, Barnes Clark sur, rig. T. B. Slick Estate & J. G. Kugle, Jr. et al's M. Freeman 1, A. J. Lagrone sur, elev 498 ft, Pecan chalk 3080-3275 ft, sd in Austin chalk 3623 ft.

UPSHUR COUNTY—Arcadia Ref. Co.'s P. S. Johnson 1, J. H. Mallory sur, rig. Dr. F. F. Beeler et al's R. H. McClelland 1, M. P. Torres sur, dk. Breman & Woods' Robertson 1, J. Stephenson sur, rig. Tips DeArmand-W. S. Capps et al's Chas. Cobb 1, Marshall Mann sur, elev 428 ft, Pecan chalk 2590-3118 ft, top Austin chalk 3723 or 3738 ft, cem cas 3774 ft, testing oil sand 3771-3785 ft. J. W. McCullough et al's John Copeland 1, Marshall Man sur, lcn. Penn Oil Co. et al's O. B. Gage 1, J. B. Davenport sur, dr 2200 ft. E. R. Perkins et al's Kay 1, T. J. Elliott sur, rig.

VAN FIELD—Helms et al's C. E. Bogue 1, Marshall University sur, elev 461 ft, sd 3098 ft. Humble O&R Co.'s R. S. Blake 11, dr 2200 ft. Pure Oil Co.'s J. A. Bracken 3, dr 1070 ft; B. E. Crim (40-ac) 2, fsh 2675 ft; Davis 1, dk; H. C. Gilbert 2, dr 1885 ft; A. F. Magers 2, cem 2763 ft; B. F. Smith 5, dr 777 ft; W. F. Swain (20-ac) 4, dk; J. T. Thompson 10, testing production 2933 ft; A. R. Tunnell 6, testing production 2955 ft; R. L. Wells 5, dk; Ella York (39.6-ac) 3, sd 2455 ft; E. York (41.1-ac) 5, cem cas 2662 ft.

WOOD COUNTY—Wood County Dev. Co.'s M. M. Rick 1, Daniel Fuller sur, dr 1500 ft.

NACOGDOCHES COUNTY—Benedum & Tree's Conkrite 1, Chireno sur, dr 50 ft clay. C. M. Bowie's Miller 1, Strode sur, lcn. J. F. Burke et al's Pattison 1, Santos sur, dr 4270 ft shale and lime. Fain & McGaha's Pirtle 1, Edwards sur, lcn. Fuhrman et al's Mattaner 1, Chireno sur, lcn. Harwell & Scott's Driver 1, Torres sur, ru. Sequoid Oil Co.'s Boyd Est. 1, Oliver sur, dk. John Starks et al's Langford 1, Cason sur, set 10-inch cas 1500 ft. W. W. Wheeler's Parmalee 1, Kirby sur, dr 1706 ft, claim gas show at 1550 ft.

## EAST TEXAS

HARRISON COUNTY — Hunter et al's Daugherty 2, W. B. Burris sur, 12½ cas 245 ft, ta in Georgetown 3563 ft. Karona Pet. Co.'s A. J. Bohler 1, S. F. Sparks sur, elev 310 ft, top Nacatosh 1437 ft, sd 2020 ft. O. H. Parkening's T. J. Taylor 1, Walter H. Payne sur, rig; T. J. Taylor 2, J. C. Hawley sur, dk. Rowan & Nichols' Henry Pitts 1, E. A. Marchant sur, lcn. W. H. Hobson, Tr.'s Taylor 1, Henry Vardeman sur, elev 284 ft, 12½ cas 355 ft, top chalk 2095 ft, sd in Georgetown lime 3520 ft. Crump & Hannagan's Dunn 1, Bettie Humphries sur, dr 3506-57 ft, sd 4006 ft. W. G. Ray Drilling Co.'s Hall 1, D. Davis sur, 10-inch cas 173 ft, coring Austin (?) chalk 3450 ft. Siegel Bros. et al's T. J. Taylor 1, F. O'Neal sur, lcn. Sinclair O&G Co.'s Davenport 1, J. V. Morton sur, dr 1860 ft. Geo. L. Pace's Barker 1, Victor Pedraso sur, rig. Banner et al's Lowry 1, Stanfield sur, dk.

MARION COUNTY—Trammell et al's Hussey 1, Chas. Lockhart sur, elev 282 ft, top chalk 1771 ft, 8¼ cas 1514 ft, junk in hole, ta 1878 ft. Rondeau & Hindman's McGaugherty 1, W. J. Wills sur, sd 2450 ft. Hindman et al's Lindsay 1, Alex Albright sur, sd 400 ft. Shasta Oil Co.'s Johnson 1, Wm. Mason sur, dr 1775 ft. Eden Oil Co.'s DeWare 1, R. Hazelwood sur, sp 10-inch cas cemtd 400 ft. Sinclair O&G Co.'s Wurtsbaugh 1, C. S. White sur, rig. Wright-Braden 1, Jacob Grover sur, sp. Claunch et al's Laun 1, Henry Fugham sur, dk.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur,, 6⅝ cas 2670 ft, sd 3190 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Bell et al's Burnett Lbr. Co. 1, S. B. Hendrick sur, elev 186 ft, sd 3335 ft. Warren & Dawes' McNeese 1, A. Booker sur, lcn abn. Dillon & Bradham's Baldwin 1, Hampton West sur, 12½ cas 43 ft, co, td 1400 ft. United Prod. Corp.'s Steele 17, B. C. Jordan sur, lcn (Trinity test). Neff et al's Brumble 6, B. C. Jordan sur, dk (Trinity test). Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, 12½ cas 780 ft, top chalk 1352 ft, 8¼ cas 1900 ft, sd 2600 ft. Ark. La. P. L. Co.'s Werner Sawmill 3, B. C. Jordan sur, 12½ cas 142 ft, 9-inch cas 3448 ft, dr 3804 ft. Everett Prod. Co.'s E. L. McDaniels 1, Alamson Barr sur, dr 350 ft (sec. hole, 1st hole junked at 398 ft after gas blowout with fresh water flow).

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, ta 4803 ft.

SHELBY COUNTY — Sloane Prospecting Co.'s T. B. Sandford 1, M. M. Vann sur, rig; Windham 1, A. H. English sur, dk pat. Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd wo rotary, td 3111 ft. I. M. Bradley et al's J. J. Asberry 1, G. W. Mitchell sur, dk. E. L. Chapman's Pickering Lbr. Co. 1, C. F. Henry sur, cemtd 10-inch cas 240 ft, dr 1050 ft. Maulding et al's Frost Lbr. Ind. 1, A. B. Fountain sur, lcn.

## WEST TEXAS

Company, Well and Location — Initial Production Bbls. — Depth

SCHLEICHER COUNTY—
Paul Teas & Walter Gant, Allison 1 * 5006

ANDREWS COUNTY—Deep Rock Oil Co. et al's Kuykendall 1, elev 3217 ft, top anhydrite 1678 ft, salt 1720-2810 ft, top brown lime 4045 ft, top white lime 4180 ft, fsh junk after shot 600 qts at 4236-4506 ft, pb from 4648 to 4565 ft, flowing oil by heads.

BORDEN COUNTY—Geo. Goodrum et al's Mrs. E. M. Conrad 1, dr 480 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, sd 2800 ft.

COCHRAN COUNTY—Continental Oil Co.'s Slaughter 1-B, elev 3809 ft, top brown lime 4070 ft, coring brown lime 4930 ft. Penn Oil Co. & Kiskadden's Slaughter 1, lcn.

COKE COUNTY—Reid-Hitchins & Stanolind O&G Co.'s Duncan 1, sp and sd.

CONCHO COUNTY—W. I. Betts & Dennis'

Wood-Hendrick 1, sp and sd. W. C. Beasley et al's Sam Waring 1, sd 267 ft. A. W. Turner-Cromwell & Wesner's Brosig 1, elev 1699 ft, ur 1885 ft.

CRANE COUNTY—Conoco & Frank Zoch's Cowden 2-B, top salt 680 ft, co with 1000 ft oil in hole at 2345-53 and 2470-77 ft. Cranfill Bro s.Oil Co. & Gulf Prod. Co.'s J. B. Tubb 1, elev 2526 ft, salt 505-1400 ft, top brown lime 1410 ft, top white lime 2455 ft, flowing 375 bbls fluid daily, 85 per cent water, dr 5275 ft. H. H. Sides et al's B. P. Nolen 1, sp and sd.

CULBERSON COUNTY—Cranfill Bros. Oil Co.'s Seay 1, sd 1930 ft. W. L. Kornrumpf et al's W. D .Garren 1, sd 1280 ft.

DAWSON COUNTY—R. A. Albaugh et al's Robinson 1, sp and sd.

ECTOR COUNTY—Galt-Brown Co. & Penn Oil Co.'s Cowden 1, elev 3047 ft, co 1030 ft. Southern Crude Oil Pur. Co.'s Cowden 2, elev 3965 ft, top anhydrite 1782 ft, salt 1872-2805 ft, cem cas 3977 ft.

EDWARDS COUNTY—Phillips Pet. Co.'s Holman 2, elev 2274 ft, dr 8015 ft.

EL PASO COUNTY — Tri-State Oil Co.'s Bobadella 1, sd 540 ft.

FISHER COUNTY—Cranfill-Reynolds Co.'s Flannigan 2, ur 3340 ft. Roeser-Pendleton, Inc.'s, Gribble 1, elev 1864 ft, co 3050 ft. Stanolind O&G Co.'s J. J. Steele 1, rig. eTxas Unity Oil Co.'s First Nat'l Bank 1, dr 1235 ft.

GARZA COUNTY—Garza County Dev. Co. (Penny & Porsey's) Justice 1, elev 2266 ft, top salt 550 ft, sd 1042 ft.

GAINES COUNTY—Texas Consolidated Oil Co. & T. P. Coal & Oil Co.'s E. H. Jones 1, elev 3636 ft, top anhydrite 2120 ft, top salt 2225 ft, sd 3435 ft.

TOM GREEN COUNTY—Phillips Pet. Co.'s Gulden-Jennings 1, elev 2016 ft, dr 5215 ft.

HOWARD COUNTY—Continental Oil Co. et al's E. E. Brinkley 1, using electric power, top salt 1170 ft, fsh 10-inch cas 1910 ft. Greene Prod. Co.'s Denman 1, sp and sd.

HUDSPETH COUNTY—R. G. Patillo & Ed. Welch's K. S. Briggs 1, dr 255 ft.

IRION COUNTY—Stanolind O&G Co.'s W. H. Williams 1, elev 2544 ft, dr 3380 ft. Straughn et al's Tankersley 1, elev 2306 ft, pb from 1506 to 1220 ft. F. E. Webb et al's Nutt 3, dr 195 ft.

JONES COUNTY — Bonds-Trout-Julian-Gulf's M. J. Willams 1, elev 1898 ft, sd after shot, td 2581 ft. Jake Croft & Tidal Oil Co.'s W. D. Swann 1, lcn. Ewmo Oil Corp.'s Hoyt 1, sd 1250 ft. Hardly Able Oil Co.'s Butler 1, dr 1500ft. C. C. Julian O&R Co.'s Sears 1, lcn. J. B. Jameson et al's King 1-A, dr 600 ft. Shaheen Oil Co. et al's J. T. Chittum 1, sd with 1850 ft oil in hole at 1972-75 ft, td 2033 ft. Ungren & Frazier's King 1, dr 1100 ft. Sam C. Yingling et al's E. D. Coates 1, sp and sd; J. A. Williams 1, testing production 2540 ft. Young & McNeill's L. R. Cade 1, rig.

LOVING COUNTY—The California Co.'s J. G. Allen 2, elev 2742 ft, top salt 830 ft, cem cas 4150 ft; Allen 3, dr 810 ft; Allen 4, rig. Erwin & Mohres' McGinley Corp. 1, rig; J. F. McKenzie 1, sp and sd; Lillie Thompson 1, rig. Folbre & Evans' D. P. Dean 1, co 1385 ft. Grisham-Hunter Corp.'s Dean 1, fsh 1285 ft. Henshaw et al's Reagan 2, rig. Pete Hoffman et al's Ramsey 1, top salt 760 ft, dr 2215 ft; Ramsey 2, sp and sd. Lewis & Slagel Drlg. Co.'s Cartwright-Henderson 1, elev 2901 ft, salt 585-2907 ft, co 2915 ft. Lockhart & Co.'s Earl Bell 1, rig. Richmond Oil Co.'s G. B. Russell 1, rig. Rush-Anderson & Moor's Wheat 1, lcn. W. A. Sudderth et al's Capitola Pool 1, rig. F. S. Tennant et al's Roy Martin 1, rig. West Texas Pet. Corp.'s J. G. Allen 2, top salt 810 ft, dr 4040 ft; Salisbury 1, top salt 890 ft, dr 3860 ft.

MENARD COUNTY—J. C. Barnett et al's Callan 4, machine. L. G. Priest et al's Sorrell 1, elev 2279 ft, sd 2965 ft. Voss & Bryan's Brandenberger 1, dr 620 ft.

PECOS COUNTY—Charlesworth-Messenger Oil Co.'s Butz 1, elev 2519 ft, sd 1290 ft. Hogan et al's Shearer 1, rig. Magnolia Pet. Co.'s Eaton 1, elev 2426 ft, top salt 966 ft, comp. swab 12 bbls oil 1618 ft. J. R. Miller et al's Bennett 1, sd 2285 ft. McCarty Oil Co.'s Gray 3, sd 1437 ft. Penn Oil Co.'s J. B. Alvis 1, elev 3493 ft, dr 2690 ft. O. J. Perren et al's Eaton 2, elev 2437 ft, sd 1765 ft. Pure Oil Co.'s Harrison 1, elev 3495 ft, top Delaware 4265 ft, sd 5000 ft. Riser & White (now Cosby Prod. & Roy. Co.'s) Riser 1, sd 500 ft. W. F. Whittaker et al's M. A. Devlin 1, sp and sd.

REAGAN COUNTY—Big Lake Oil Co.'s University 1-C, flowing 976 bbls (43.1 gravity oil at 50 degrees temperature) after deepening to sandy-lime 8729 ft. Continental Oil Co.-Group One Oil Corp.'s University 2-B, coring lime 8590 ft.

REEVES COUNTY—The California Co.'s Kloh 2, dr 1570 ft. Lee O. White et al's Mrs. Hersheusen 1, co 4415 ft.

RUNNELS COUNTY—Chas. Dutton et al's Dean 1, sd 2335 ft.

SCHLEICHER COUNTY — Eastland Oil Co. Unit Plan's Tisdale 1, elev 2295 ft, dr 1710 ft. Teas & Gant's Allison 1, abn 5006 ft. J. D. Wesner et al's Ratcliff 1, elev 2408 ft, dr 1490 ft.

SCURRY COUNTY — R. B. Pender O&G Co.'s Davis 1, elev 2208 ft, top salt 445 ft, fsh 5003 ft. Seifert & Dibble's Blackburn 1, top salt 720 ft, dr 2860 ft.

STERLING COUNTY—W. C. Beesley et al's W. L. Foster 1-A, elev 2518 ft, co 680 ft.

TAYLOR COUNTY — Adams Ferguson & Hobbs' Lowe 3, elev 1918 ft, sd 1970 ft. J. B. Jameson et al's Webb 1, elev 1905 ft, dr 6325 ft. Sanger et al's Abilene Water Works 1, elev 1759 ft, sd 2785 ft.

TERRELL COUNTY — Mid-Kansas O&G Co.'s M. H. Goode 1, elev 2405 ft, making dry gas, dr 6085 ft. L. Jones et al's Pankenham 1, elev 2607 ft, dr 730 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, elev 2130 ft, sd 6780 ft.

UPTON COUNTY—Bennett Oil Co. & P. H. Williams' Shirk 1-A, elev 3106 ft, top lime 2510 ft, sd with 900 ft oil in hole 2660-2727 ft. C. C. Duffey et al's McClintic 4, dr 1350 ft. Gulf Prod. Co.'s McElroy 92, show gas 2698 ft, dr 2705 ft; McElroy 93, rig. Mintex Oil Co. & Harry Baldwin's Lane 1, sp and sd. Bert Weekley Oil Corp.'s McClintic 2, rig.

WARD COUNTY—Alpine Oil & Dev. Co.'s Boogher 3, sd 765 ft. Beckley et al's Johnson 1, dr 415 ft. Bell & Wier's Boogher 1, dr 480 ft; Boogher-Cummings 1, dr 865 ft. Buster Black et al's Hall-Roberts 1, machine. Alex Bradford et al's B. Carson 1, dr 780 ft. Clyde Bradford et al's Hordage-Wilson 1, sp. California & Atlantic Oil Prod. Co.'s Gordon 1, elev 2523 ft, top salt 1000 ft, sd repairs to machine 2200 ft. Gibson Bros. et al's Johnson 1, dr 440 ft. Gulf Prod. Co.'s Hutchings 7, elev 2648 ft, top anhydrite 910 ft, top salt 1162 ft, making 15,800,000 ft gas and 30 bbls oil daily 2490-2500 ft; O'Brien 17, rig. Harkinson et al's A. Emory 1, lcn. Magnolia Pet. Co.'s Atlantic-Sealy 1, elev 2686 ft, top anhydrite 1505 ft, ur with hfw 2083 ft. R. F. Owen et al's Johnson 1, elev 2499 ft, top salt 1600 ft, co 2823 ft. Peck et al's Geo. Merritt 1, sp. Rickford & Fugler's Boogher 1, top salt 790 ft, dr 1550 ft. Paul Ryan et al's Allen 1, elev 2931 ft, top salt 800 ft, sd with 1600 ft oil in hole 2180-2244 ft. Shipley Oil Corp.'s Hayzlett 5, sd after shot, td 2507 ft; Monroe 1-A, elev 2655 ft, top salt 2485 ft, fsh 3780 ft. Simms Oil Co.'s M. Himmel 1, rig. Chester Smith et al's Boogher 1, dr 1665 ft.

WINKLER COUNTY—Magnolia Pet. Co.'s Bashara 1, elev 2884 ft, top anhydrite 829 ft, top salt 996 ft, top lime 2317 ft, exhausted oil pay, dr 3305 ft.

## TEXAS GULF COAST

ANGELINA COUNTY—R. D. Moore's Abney Est. 1, dr 600 ft shale. Pollack Oil Co.'s Sessions 1, lcn.

AUSTIN COUNTY—O'Hara et al's Schrader 1, dr 3480 ft shale. Empire's Kunze 1, San Felipe, dr 6310 ft shale. Parmeson & Cafferkey 1, ru.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, 2 mi s Nash Dome, sd 6220 ft. United Oil Synd.'s Speer 1, 3 mi n Danbury, wash to bottom 1687 ft. Freeport Sulphur Co.'s Fee 2001, Bryan Mound, sd 5149 ft. Layne et al's Wisdom 7-A, Damon Mound, dr 3660 ft, slight oil show. Rycade's Seaburn 3, dr 7300 ft lime.

BURLESON COUNTY — Doran et al's Sparks 1, fsh 1300 ft. Mid-South Oil Co.'s Duckworth 1, 2 mi e Clay Station, sd 2590 ft. Reynolds Oil Co.'s Harris 1, sd 400 ft.

CALHOUN COUNTY — The Texas Co.'s Smith 1, Chocolate Creek, dr 1960 ft shale.

CHAMBERS COUNTY—Pure's Mayes 13, Lost Lake, lcn.

FAYETTE COUNTY—Elam & Reynolds' Florence 1, sd 1030 ft.

FORT BEND COUNTY—Gulf's Moore 28, dr 5390 ft shale.

GALVESTON COUNTY—Marrs McLean's Cade 20, High Island, ru.

GRIMES COUNTY—Wainwright-West Oil & R. H. Deering's Templeman 1, 6 mi s Navasota, abn 4563 ft.

HARDIN COUNTY — Pearce & Proctor's Russell 40, lcn. The Texas Co.'s Fee 307, Sour Lake, stdg 3000 ft.

HARRIS COUNTY—Cypress Oil & Dev. Co.'s Kitzman 2, t.a. 4430 ft. Humble's Minnetex 5, Mykawa, ru; Minnetex 6, Mykawa, lcn. Mike Kouri & Grayburg Oil Co.'s Bender 1, Pierce Junction, set screen, prep to test at 4230 ft. Rio Bravo's GH&SA 102, Pierce Junction, dr 4420 ft sand. Settegast 21-A, Pierce Junction, lcn. Smith-Hamill Dr. Co.'s Parsons 1, Pierce Junction, lcn. Smith et al's Fee 3, Pierce Junction, prep to pump 4467 ft. Tilton and Perot's Fee 1, Pierce Junction, set 10-inch cas, dr 1600 ft. Warner-Quinlan's Minchen 2, Pierce Junction, dr 4340 ft sand and shale.

JEFFERSON COUNTY — Humble's McFaddin 1, 8 mi e Big Hill, dr 6240 ft sand. Keith et al's Reed-Hankamer 1, 3 mi ne Westbury, dr 4000 ft shale. The Texas Co.'s Pipkin 4, Big Hill, dr 5020 ft sand. Yount-Lee's McFaddin 145, lcn.

LIBERTY COUNTY — Cranfill-Reynolds' Davis 7, dr 1330 ft gumbo, set 12½-inch cas. Texas Gulf Sulphur Co.'s Carter 3, Moss Bluff, abn 1120 ft anhydrite. Hamm et al's Harvard 1, Davis Hill, sd 1010 ft. Gulf's Boyt 12, Hankamer, set 9⅝-inch cas 4455 ft; McFadden 3, Moss Bluff, dr 6190 ft, shale, slight oil show. Humble's Breeden 2, Moss Bluff, dr 5720 ft shale; Sergent 2, set 7-inch cas 5890 ft; Sterling 7, Moss Bluff, prep to dr plug 5858 ft. Texas Gulf Sulphur Co.'s Munger 1, Moss Bluff, dr 330 ft gumbo.

MATAGORDA COUNTY — Cockburn Oil Corp.'s Hawkins 2, Shepherds Mott, stdg 5170 ft. Empire's Boker 1, Citrus Grove, sdtr 5280 ft.

MONTGOMERY COUNTY—Price & Wilhite's Juergus 2, 3 mi Conroe, set 6⅝-inch cas at 3518 ft.

ORANGE COUNTY—Crews Oil Co.'s Mansfield 1, Stephenson sur, dr 1400 ft shale.

POLK COUNTY—Freeman et al's Freeman 2, sd 2400 ft.

ROBERTSON COUNTY—Lang & Cates' Maris 1, 2 mi nw Franklin, dk. W. N. Quick's March 1, 7 mi sw Franklin, sd 1000 ft.

SAN AUGUSTINE COUNTY — Lambeau Dr. Co.'s Whitton 1, lcn.

SAN JACINTO COUNTY—Arkansas Fuel Oil Co.'s McMurray 1, dst 3491-3503 ft, made 33 fourbles sw in 7 min. E. P. Edwards et al's Bennett 1, sd 40 ft.

TYLER COUNTY—King Oil Co.'s Caswell 1, sd 1250 ft. Texas Sun Co.'s Wilson 3, dr 4740 ft rock. L. H. Wentz's Long Bell Lbr. Co. 1, woc 2214 ft.

WALKER COUNTY—Joyce Richardson et al's Smither 1, 12 mi n Huntsville, sd 3455 ft.

WASHINGTON COUNTY—Cord Oil Co.'s Hahn 1, 6 mi n Brenham, sd 1830 ft. Yegua Oil Co.'s Graves 1, sd lcn. Penn-Tex Oil Co.'s Kamas 2, Brenham, dr 1380 ft gumbo. Sun Oil Co.'s Caraway 5, comp for 125 bbls 1322 ft; Clay 5, Gay Hill, coring shale 1039 ft; Marcus 3, lcn.

WHARTON COUNTY — H. H. Given's Hudgins 3, dr 100 ft shale.

## LOUISIANA GULF GOAST

ACADA PARIS—Yount-Lee's Latrielle 9, Evangeline, abn 8900 ft.

ASCENSION PARISH—Gulf's United Land Co. 19, Sorrento, set scr. to test 4870 ft. Triumph Oil Co.'s Lacey 2, stdg 4225 ft.

AVOYELLES PARISH—M. L. Vincent's Morrow 1, sd 4220 ft.

CALCASIEU PARISH — Wilfred Lahay's Jardell 1, 2 mi ne Vinton, sd 3250 ft. Dr. Thomas et al's Hewitt 1, lcn. Vacuum's State 7, ru; Miller 12, Lockport, stdg 3790 ft; Miller

32, lcn. Union Sulphur Co.'s Martha Moss 2, Lockport, dr 6090 ft gumbo. J. O. Davis' Lind. Lbr. Co. 1, Starks, stdg 6568 ft.

CAMERON PARISH — Freeport Sulphur Co.'s Gulf Land Co. 7, Black Bayou, lcn. Shell Pet. Co.'s Watkins 16, Black Bayou, set 5-in cas 4519 ft; Black Bayou State 2, Black Bayou, dr 4290 ft salt. The Texas Co.'s State Calcasieu Lake 7, lcn. Vacuum's Cameron Meadows 2, Cameron Meadows, dr 120 ft shale. R. E. Seiss Trustee's Vincent 2, Hackberry, set 10-inch cas 1290 ft. Magnolia's Sweet Lake Land Co .2, Sweet Lake, dr 4860 ft gumbo and lime. Pure's Yount-Lee 10, Sweet Lake, dr 6940 ft shale.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 10, Jefferson Island, abn 2270 ft; Lake Peigneur 11, dr 760 ft lime. The Texas Co.'s Vermilion Bay 6, abn 5868 ft.

IBERVILLE PARISH—Gulf's Gay 1, Bayou Choctau, set scr 4174 ft; Standard's L. Baist 1, Bayou Blue, dr 3300 ft w. s; Schwing 1-A dr 5760 ft sand; Schwing 3, Bayou Blue, sd 2990 ft; Wilbert 7, pocket; Case 2, Des Glaise, lcn; Wilbert 9, Bayou des Glaise, set 18⅝-inch cas 500 ft; Wilbert 8, dr 1030 ft gumbo. Texas Gulf Sulphur Co.'s Wilbert 9, Bayou Choctau, abn lcn, moving materials.

JEFFERSON DAVIS PARISH—H. T. McClain et al's Atterbury 1, Welsh, dr 6020 ft shale and lime. A. V. Peters' Smith 1, Welsh, lcn.

LA FOURCHE PARISH—The Texas Co.'s Leesville 2, dr 3940 ft shale.

PLAQUEMINE PARISH — Gulf's Burras Levee 2-B, Rose Dome, abn 2460 ft. Humble's Cockrell-Moran 2, Lake Grande Ecaille, abn 5860 ft.

ST. JAMES PARISH — Convent Oil Co.'s Jacobs 1, dr 2280 ft gumbo.

ST. LANDRY PARISH—The Texas Co.'s Botney Bay 9, Port Barre, set 9⅝-inch cas 3390 ft.

ST. MARTIN PARISH—Humble's Woodward 1, Bayou Bouillon, dr 5920 ft sand; State 4, dr 4620 ft sand.

ST. TAMMANY PARISH—Washington & St. Tammany Drlg. Co.'s Coussack 2, sd 2030 ft.

TANGIAPAHOE PARISH—Joan Dev. Co.'s Lake Superior Pil Co. 1, sd 3016 ft.

TERREBONNE PARISH—La. Gas & Fuel Co.'s Minor Estate 1, Houma, sd 6300 ft. The Texas Co.'s Bay St. Elaine 1, Bay St. Elaine, fsh 4750 ft; Bay St. Elaine 6, lcn; State Caillou Island 4, ru; Four Isle 5, Four Isle Bayou, dr 400 ft sand; Lake Barre 8, Lake Barre, dr 6700 ft rock; Lake Barre 10, lcn; Lake Barre 11, lcn; Lake Barre 12, lcn; Lake Barre 13, lcn; Lake Barre 14, lcn.

VERMILION PARISH—Pure's La. Land Co. 1, Gueydon, abn 6594 ft.

WEST FELICIAN PARISH — Putnam Synd's Como Plantation 2, dr 520 ft sand.

## SOUTH TEXAS

BASTROP COUNTY—Turner, Wharton & Anderson's J. E. Harris 1, Hoshua Gray sur, 3 miles n Dale pool, dr 1315 ft.

BEE COUNTY—Alexander et al's McFall 1, 3 miles s Skidmore, dr 295 ft. Catlett & O'Neill's Miller 1, Ronald Hoskiss sur 8, miles w Beeville, dr 1125 ft. Mauldin & Fisher's A. J. Kimball 1, east and sonth of Grayburg Kimball well, Stephen Winship sur, 7 mi sw Pettus, sand 3536-39 ft, showed 175 pounds pressure in 3½ minutes before tester seat gave away. Hicks et al's Billingsley 1, one mile ne Grayburg well, B. Q. Hadley sur, dr 2877 ft. J. S. Mauldin's Mauldin 1, just s Pettus, Geo. A. Kerr sur, still wait on csg 3862 ft. E. S. Price's Weiss 2, 3½ mi se Pettus, sd 4552 ft. United Prod. Co.'s Ray 33, between Pettus and discovery pool, sw No. 31, ru; Ray 35, 1100 ft e of extension wells, Thos. Hanson sur, dr 3125 ft; Ray 36, n of extension wells, T. Hanson sur, dr 931 ft.

BEXAR COUNTY—Russell & Moore's A. O. Mills 3, Navarro sur, sd 938 ft. J. Morgan Russell's Price Story 1, A. Navarro sur, 10 miles s of S. A. on Somerset road, re-dr at 1025 ft after installing larger steel derrick and new rig. Uechert et al's Palfrey 1, 7 miles se San Antonio, near Brooks field, sd 1710 ft. Weilbacher and Brock's Ernest 1, 2 miles n Somerset, J. Christopher sur, sd 925 ft.

BLANCO COUNTY—Hardy Sitton's Standeford (formerly Adams & Lyle's) sur 155, 3½ miles nw Blanco City, to re-dr 952 ft; McMillen 1, 2 miles w Blanco City, Benjamin Williams sur 125, dr 786 ft. Meeks et al's Walker 1, ne corner Noel Nixon sur No. 23, 4 miles n Blanco City, pull csg and ream to recover tools. Forest Oil Co.'s (Rosenfield et al) Hohenberger, sur 94, sd 550 ft.

BROOKS COUNTY—The Texas Co.'s Allen Land and Cattle Co., in 7110-acre San Antonita Grant, to make lcn. Ed. East's Garcia 3, Las Mastena y Gonzalene grant, sd 960 ft. Houston Oil Co.'s Wormser-Holbein 3, Palo Blanco de Maguellas grant, Lassiter pool, dr 4315 ft.

CALDWELL COUNTY—Mills and Chapman's McMahon 2, 50 ft e No. 1, Pincheback sur, 6 miles se Lockhart, gas abt 500 ft. Nuehaus and Camp's Moore 1, 6 miles s Lockhart, ¾ mile nw Mills test, W. Clinton sur, dr 1810 ft.

COMAL COUNTY—Caldwell and Lanier's T. J. Byler 1, HE&WT sur No. S-894, 10 miles s Blanco City, setting 10-inch 600 ft.

DE WITT COUNTY—Gibson and Strum's E. T. Vlark 1, Dolores Aldereda sur, 1 mile n Slick pool, lcn.

DUVAL COUNTY—F. M. Frasher & R. F. Schoolfield's Bishop Cattle Company 2, sur 136, S&O pool, dr 500 ft. Humble O&R Co.'s Kohler 50, sur 164, sd 5595 ft, repair rig. Magnolia Pet. Co.'s Wilson 2, S&O pool, sec 134, prod 500 bbls, casing set 2368 ft, total depth 2377 ft. O'Byrne et al's Weil Bros. 1, 7 miles se S&O pool, sur 568, dr 1620 ft. Southern Oil Co.'s King Harper 2, sur 323, lcn. SR & C & Vacuum Oil Co.'s Duval County Land Co. 4, 300 ftw discovery well, sec 293, completed 550 bbls oil, 10,000,000 cubic ft gas 1729 ft, cas set 1710 ft.

FRIO COUNTY — Wray and Dunbar's Barnes 1, 1 mile from Big Foot, sec 123, cleaned out hole, wait on casing, total depth 3708 ft.

GOLIAD COUNTY—Gibson Oil Co.'s Parks 1 (wo) 5 miles ne Goliad, moving on new rig, total depth 5267 ft. Slick Estate's Reidel 1, 1830 ft sw discovery well, W. C. Brown sur, Slick pool, dr 600 ft.

GUADALUPE COUNTY — S. A. Oil and Royalty Co.'s Dibrell 1, sw of field, sec 6, H&TC Ry sur, lcn. Sun Oil Co.'s Dowdy 1, one-fourth mile south of field, Jacob Darst sur, standing full of oil, slopping over at intervals, total depth 2593 ft. Simms Oil Co.'s Manford 5, Manford pool, abandoned 2671 ft, topped chalk 2421 ft, shot 100 qts 2432-60 ft, no increase.

JIM HOGG COUNTY—Mag Pet. Co.'s Y. V. Cellar 1, blk 92, W. A. Dannelly sub, sur 575 ft, coring 2137 ft. Peterman and Minahan's Palacios 1, blk 14, sur 231, se Randado field, ru. J. W. Pippin's N. Hinnant 1, blk 11, sur 147, dk. A. J. Kolling (formerly J. D. Pulliam, Jr.) Jones 1, to re dr 2844 ft.

JIM WELLS COUNTY—Blair and Son and Stewart's M. Perez 1, 2123 ft at last report. Carsill O&G Co.'s McGill 1, Wm. D. Baldwin sur, 3 miles n of Armagosa, running wild, large gasser, casing set 2682 ft. R. H. Ewell's Doering 1, dr 2912 ft.

KARNES COUNTY—Karnes County Development Company (Pickett et al) W. J. Hubbard 1, Isaac Ticknor sur, 3 miles w Kenedy, ru. J. Morrisey's Ragsdale 1, dr below 3000 ft at last reports.

KENDALL COUNTY—Theo. Hicks et al's Speck and Wiedner, one-fourth mile se of center of Thomas Fowler sur No. 27, near juncture of Kendall, Blanco and Comal county lines, 3 miles se of Twin Sister mountains, lcn. Hardy Sitton's W. B. Garvin 1, D. L. Richardson sur No. 7, 1 mile ne Sisterdale, dr 1068 ft.

KERR COUNTY—Evans and Gant's Seiker and Mears 1, sw corner sec 1605, CCSD&RGN R Ry. sur, 2 miles ne Love test, dr 546 ft. Mims et al's J. E. Young, nw corner section 28, ne of Love well, rigged up.

LIVE OAK COUNTY—Houston Oil Co.'s Parr 1-A, ¾ mile south Brown Land and Cattle Co. 4, John McMillen grant, set surface csg 574 ft; Brown Land & Cattle Co. 4, sw corner M. B. Kivlin sur, sand 5012 ft, show oil and gas, shale 5012-17 ft, waiting on screen to complete; Brown Land & Cattle Co. 3, nw corner M. B. Kivlin sur, abnd 5573 ft. Southern Exploration Co.'s Ponder 1, BS&SF sur No. 1, fsh for core barrel 4125 ft.

McMULLEN COUNTY—Nehaus and Standolind O&G Co.'s J. O. Massey 1, ½ mile s Lomo Alto, dr 1305 ft.

NUECES COUNTY—Bess et al's Boory 1, 2 miles nw Saxet pool, sand 4037-46 ft, showed 750 lbs. and one fourble of oil in 3 minutes, to dr deeper. Houston Oil Co.'s Ollie Purl 1-B, blk 7, R. Peters sur No. 2, Agua Dulce pool, dr 5660 ft; Rand Morgan 2, Saxet pool, completed 35,000,000 cubic ft gas and 40 bbls oil after plugging back from 4095 to 4093 ft, 1500 pounds pressure on ½ inch choke. Saxet Oil and Gas Co.'s Dunn 7, dr out plugs 4296 ft, showed 750 lbs and little oil on dst at 4296 ft. Moody-Seagraves Producing Co.'s Sedwick 1, Saxet pool, casing set 4097 ft, wait on cement. H. H. Weinert's Mohle 1, sec 94, just south of Driscoll townsite, abn 5408 ft.

REAL COUNTY—Evans and Sprinkle et al's Marcus Auld 1, sec 15, blk D, HE&WT Ry. sur, 4 miles ne Love test, sd 4002 ft, contract depth, for orders. Gant and Kilgore and Eastland Oil Co.'s Dan Auld 1, sec 23, CCSD& RGNR Ry. sur, 3 miles sw Love producer, dr 1560 ft. Evans and Sprinkle's Gaby 1, sec 175, AB&M sur, 7 miles sw Love 1, dr 1365 ft.

REFUGIO COUNTY — Houston Oil Co.'s Rooke 1-B, two miles sw of Refugio, ½ mile w of production, dr 6658 ft; Rooke 14, in old gas area, west of field, dr around 5150 ft at last report. Morgan and Rutherford's Rogers Heirs 1, sd 3684 ft. L. L. Smith's Rogers Heirs 2, west of field, sd 5110 ft.

SAN PATRICIO COUNTY—United Production Co.'s Cage 3, White Point field, dr 2129 ft.

STARR COUNTY—Kush and Duerkson's Kelsey Bass 1, sd 856 ft. Los Olmos Oil Co.'s Kelsey Bass 2, sd 881 ft. Sacramento O&G Co.'s Seabury et al 1, sd 349 ft.

VICTORIA COUNTY—Lion Oil Refining Co.'s McFadden 3-A, Maria Traviesa grant, McFadden district, set surface csg abt 1000 ft. The Texas Co.'s McFadden 3, west of McFadden 2 wild gasser, dk. The United Production Co.'s McFadden 1-B, near Guadalupe river and Calhoun County line, showed 19 fourbles of sw in three minutes on dst of sand 3512 ft, now dr 4002 ft.

WEBB COUNTY Cole Pet. Co.'s (Carson) Benavides 4, sur 1601, spudded. O. W. Killam's Killam 1, sur 1617, dr 2546 ft; Cuellar 4, share 4, Cuellar Grant, dr 2728 ft. Geo. S. Marshall's C. W. Webster 3, sur 684, Carolina-Texas pool, re dr, now at 4050 ft. Carolina-Texas Barnsley 9, blk 13, sur 268, Carolina-Texas pool, dr 15 ft in hard rock. South Texas Prod. Co.'s S. Benavides 4, Cole pool, blk 320, Myrtle Hale sur, Mariano Arispe Grant, set 6⅝ inch csg 1704 ft, sand topped at 1704 ft, showed gas through tester.

ZAPATA COUNTY — Allied O&G Co. & Allen and Morris' Gutierrez 12, share 4, Fansler Partition, Comitas Grant, sd 100 ft. Benson Oil Co.'s S. Vela 1, blk 12, sur 259, dr 630 ft. W. T. (Bill) Henry et al's Gopher Trust Es-

**ABBREVIATIONS**

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd— shut down; sdtr—sidetracking; sp—spudding; sr — straight raming; std — standardizing; sw — salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

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Address.....

Company.....

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ate 1, blk 10, sur 4, Fulllerton sub of Share 8, Borrego Grant, dr 950 ft. O. W. Killam's A. Bustamante 4 (formerly K&P Oil Co.) Blk. 6, Share 5, Fansler Partition, Comitas Grant, dr 1925 ft; Cuellar 40-C, sur 278, dk; Killam 4, sur 182, blk 11; abn 2946 ft; Cuellar 42-B, sur 277, lcn. Mid-West Public Utilities Co.'s M. P. De Garza 1, blk 33, Pedernal Grant, sd 1580 ft. P. M. Meyers' I. G. Trevino 1, blk 24, sur 412, sand 1320 ft, coring deeper. National Oil Co. of Texas' Luther et al 1, blk 97, Da Pron sub, ne ½ Porcion 6, dr 600 ft. Neilson and Coursey's Luther et al 1, blk 11, sec 5, Fullerton sub Share 8, Borrego Grant, sd 1148 ft. J. I. Newton's I. G. Trevino 3, blk 7, sur 66, lcn. Nordan and Morris's Concepcion Bustamente 1, share 33, Fansler Partition, Comitas Grant, coring 1829 ft. B. F. Nixon's A. Gutierrez 1, lot 5, blk 8, Partition 10, Borrego Grant, abn 37 ft. John Pappas Pool Inc.'s, Flores 1, 6000 ft from Rio Grande, Porcion 35, dk. Penny Prod. Co.'s Juan V. Cuellar et al 1, blk 1, sur 2, Porcion 33 and 34, dr 2050 ft at last report. S. T. Phelps, Trustee, (Blankenship) Garza 2, blk 2, sur 413, abn 1956 ft. W. R. Shankle's Garza 3, blk 10, sub of Zorro ranch, Comitas Grant, dr 600 ft. SR & C Oil Co.'s Montermayor 5-D, blk 8, sur 64, showed considerable gas in alternate sands from 1337-1492 ft, now drilling deeper. F. A. Talmadge and G. McKenzie's G. F. Trevino 1, blk 6, sur 4, Marts & Beavens sub of Porcion 2 and 3, sd 715 ft, to re dr. T. H. Ward's Uribe 1, blk 8, sub of share 7, Partition 6, Trinidad Uribe Partition of Juan V. Borrega grant, ru and std.

## NORTH LOUISIANA

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| CADDO PARISH— | | |
| Libby et al's Foster 1 29-15-16..... | * | 3225 |
| DESOTO PARISH— | | |
| S. A. Guy et al's Dowling Bros. 1, 31-14-14 ..... | * | 1354 |
| SABINE PARISH, (Zwolle)— | | |
| Franks et al's Dew 1, 22-8-11..... | * | 2534 |
| Merritt Tr.'s Byrd 1, 1-7-11.....1200 | | 2445 |
| NATCHITOCHES PARISH— | | |
| Gulf Ref. Co.'s Bodcaw Lbr. Co. 1 13-13-8w ..... | * | 4219 |

BIENVILLE PARISH—Jamestown Synd.'s Lawhon 1, sw ne 15-16-8w, show gas in sandy shale in Tokio cemtd 6-in 2845 ft cas parted while blg mo cas at 1600 ft, td 2854 ft.

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, dry 2062-67 ft, coring 2545 ft. H. I. Morgan et al's Kendricks B-13, ne sw 22-19-11, 10-in 143 ft, coring 1706 ft, (sec. hole). Rambaugh et al's Allison 1, 10-19-13, sd 1100 ft. R. O. Roy's W. H. Hodges 1, ne ne 19-16-10, 12½ cas 140 ft, tested sw show oil 2620 ft sd.

CADDO PARISH—United Gas Pub. Serv. Corp.'s Emmons 1, ne sw 27-23-16, 12½ cas 363 ft, 9-in 3635 ft, dr 5140 ft. Fortner 1, nwc frac sec 5-22-16, cemtd 5-in cas 5430 ft, td 5435 ft. Garry M. Gordon's Hatcher 1, nw ne 11-17-15, lcn (5500 ft, test planned). Pyramid O&G Co.'s Wheeler 1, se sw 9-18-16, 10-in 450 ft, 6⅝ 2779 ft 6 ft sand td 2786 ft. Libby et al's Foster 1, ne se 29-15-16, dry abn td 3225 ft. Ralph Davidson et al's F. Weiller 1, 33-17-13, 10-in 40 ft, base Blossom 1997 ft, dry thru ds 2440-71 ft, arr deepen.

CATAHOULA PARISH—National Drilling Co.'s Marsh McMillian 1, 26-9-6e, 6⅝ cas 2796 ft, tested sw 3097 ft, arr deepen.

CALDWELL PARISH—Hudson et al's Burton 1, 36-12-2e, sd 2621 ft, (corrected depth). Carter Bell et al's Taylor 1, 42-14-4e, rig.

CLAIBORNE PARISH—Baird Bros. et al's Whittaker 1, 30-20-7w, dr hd shale 2710 ft.

CONCORDIA PARISH — Fred Stovall's Grasmere 1, 23-8n-10e, 8-in 152 ft, dry 1025-1100 ft, dr 1500 ft. Joe Marr et al's Maxwell 1, 38-3-8e, sd 3622 ft.

DESOTO PARISH—W. H. Weichert's H. Smith 1, 31-14-15, top gas sand 1653 ft, top chalk 1901 ft, sd 2350 ft. Neff et al's Ramsey 1, 33-13-16, 12½ cas 80 ft, bit lost in hole sd 3000 ft. S. A. Guy et al's Dowling Bros. 1, 31-14-14, dry abn td 1354 ft, (leases exp). E. T. Oakes' Bryant 1, 30-13-15, lcn.

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 29-11-10, 10-in 60 ft, dry show oil in bro sand and shale 1256-69 ft arr deepen. Gulf Ref. Co.'s Bodcaw Lbr. Co. 1, sw ne 13-13-8w, 12½-in cas 910 ft dry abn in blue shale td 4219 ft. W. M. Coates et al's Collins 1, sw nw ne 28-9-10, base Midway chalk 2612 ft, base hd lime 4039 ft tested 15 joints mud and sw 4020-91 ft sd wo. J. W. Cooper et al's Cooper 1, 35-11-10, dry 2980-3060 ft, sr td 3100 ft. Cooper 2-A, 35-11-10, top chalk 1400 ft sd 1515 ft.

RED RIVER PARISH—Lucky Strike Oil Co.'s Chaffraix 1, 33-12-10, tested est 500 bbls sw show oil 2820-3010 ft, lost 1800 ft, ds and well pckr in hole ta 3010 ft.

SABINE PARISH—J. C. Walton's Sabine 1, ne nw 11-7-12, 6⅝ cas 2119 ft dry small show oil sd 2327 ft. Lacey Pet. Co.'s Cooper 1, 30-8-11, top chalk 2306 ft 6⅝ cas 2270 ft, hfo wosr td 2620 ft. Cooper 3, sw ne 30-8-11, rig. Trans-American Oil Co.'s Carter 1, 36-8-12, top marl 2311 ft, 6-in 2211 ft, 700 ft oil hole wosr to 2540 ft. Jean Longoria's Belton 1, 31-9-13, sd 1400 ft. Franks et al's Dew 1, 22-8-11, 6-in 2111 ft, top marl 2265 ft, dry abn td 2534 ft. Triangle Pet. Co.'s Sabine 2, 36-8-12, dk. D. M. Lide's Ponder 1, 15-7-11, top marl 2393 ft, top chalk 2407 ft, 6-in 2385 ft, hfo wosr td 2800 ft. Ponder 2, ne nw 15-7-11, 10-in 102 ft, 6⅝ cas 2364 ft, show oil 2420 ft, arr deepen. Jno. Woodley's Sabine 1, ne se 12-8-12, 10-in 103 ft, 6⅝ cas 2310 ft. H. W. Perritt's Bowman-Hicks 3, 2-7-12, 6⅝ cas 2206 ft, mf fluid wosr td 2293 ft. Bowman-Hicks 4, se ne 2-7-12, lcn. A. H. Thomas' Edwards Est 1, ne se 8-8-13, dk. R. L. Gay, Tr.'s Long-Bell Lbr. Co. A-1, ne nw 10-8-13, rig. Jordan & Co. Inc.'s La. Long Leaf 1, sw se 3-7-11, sp 10-in 100 ft dr 640 ft. Gautier et al's Meshell 1, se nw 30-8-12, sd in sec hole 90 ft. Ohio Oil Co.'s Bowman-Hicks 7, ne ne 2-7-12, 10-in 100 ft 6⅝ cas 2215 ft blg to test. Bowman-Hicks 8, nw ne 2-7-12, dk. Bowman-Hicks 9, nw se 35-8-12, lcn. Bowman-Hicks 10, sw ne 35-8-12, lcn. Bowman-Hicks 11, sw ne 2-7-12, lcn. Durham Oil Co.'s Polly 1, sw ne 18-8-12, 10-in 105 ft 8¼ cas 2087 ft, dr 2400 ft. Packard Oil Co.'s Davis 1, sw sw 8-7-10, 10-in 80 ft, sd 2502 ft. Merritt Tr.'s Byrd 1, se nw 1-7-11, cemtd 6⅝ cas 2390 ft flowing 1200 bbls oil day thru choke td 2415 ft. W. M. Coates' Sabine 2, 2-7-12, 10-in 100 ft 6⅝ cas 2207 ft dr plug. Sabine 3, 1-7-12, sp 10-in 103 ft dr 760 ft. Sabine Royalties Co. Inc.'s Bill Hill 1, nw ne ne 5-7-11, rig. National Gas Prod. Co.'s Sabine 1, 1-7-12, dk. H. W. Perritt's Boring 1, ne nw 11-7-12, rig.

TENSAS PARISH — Seip et al's Fowler 1, 10-10-10e, co to deepen td 905 ft. A. R. Willis' Curry 1, 39-11-12, sd 3310 ft.

VERNON PARISH — Smith, Weir et al's Delta L&T Co. 1, ne ne 14-2n-11w, rig.

WEBSTER PARISH—D. M. Coyle's Frazier 1, ne se 27-23-11, dk. Cassidy & Davis' Nickerson 1, ne sw 29-23-10, sd 160 ft. Red Hawk Oil Co.'s Matthews 1, se nw 11-23-9, top chalk 2480 ft dr lime 2518 ft.

## ARKANSAS

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| CRAWFORD COUNTY— | | |
| Citizens Gas Co., Hood 1, 18-9n-32w. | ¶¼ | 960 |
| MILLER COUNTY— | | |
| Salzer & McRae, Rose 1, 28-15-26... | * | 475 |
| Lenz et al, Johnson 2, 24-15-26..... | * | 4700 |
| Johnson 3, 24-16-26 ..... | * | 2850 |
| UNION COUNTY— | | |
| Murphy et al, Union Sawmill 1, 18-18-13 ..... | * | 3615 |

CHICOT COUNTY—H. R. Smith's Lytle 1, 31-18-3, cemtd back to 2865 ft, ta old td 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s Underwood 1, nw ne 4-20-8e, dr gumbo 1170 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9, sd 3740 ft.

CRAWFORD COUNTY—Citizens Gas Co.'s Hood 1, ne se 18-9n-32w, 20,000 ft gas td 960 feet.

DALLAS COUNTY—Jno. James, Tr.'s Fordyce Lbr. Co. 1, ne nw 11-9s-15w, 10-in 176 ft, coring chalk 2370 ft. E. C. Brewer, Tr.'s Hillman 1, se ne 20-10-13, 10-in 138 ft, tested dry thru ds 2628-48 ft, in sandy lime and sand coring 2671 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, cas pulled hfsw ta 3756 ft.

GRANT COUNTY — Spann & McClung's Sarah Page 1, sw nw 3-3-12, sd wo drill line td 464 ft.

HOT SPRINGS COUNTY—John Watkins, Tr.'s Cunningham 1, 11-5-16, sd wo drill stem 220 ft.

JOHNSON COUNTY—Blackwell O&G Co.'s Wyver 1, 21-8-23, ta 5600 ft.

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, rig. McIver et al's Hattle 1, nw ne 1-20-26, 12½ cas 115 ft sd 2520 ft. Smitherman & McDonald's Bodcaw 1, se nw nw 16-15-22, 12½ cas 42 ft 8¼-in cas 1176 ft bailed and swabbed sw show oil at 1194 ft, cored oil sand 1194-98 ft, sd wo td 1198 ft. Cosby Prod. & Royalty Co.'s Biddle 1, ne ne 1-20-26, lcn.

LAWRENCE COUNTY — Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LITTLE RIVER COUNTY — Fay Roberts Oil Co.'s Russell 1, nw nw 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd 3610 ft.

MADISON COUNTY—J. W. Baxter's Hallem 2, cent sec 17-16-26, sd 405 ft. Hallem 3, ne sw 1-17-26, sd 42 ft.

MILLER COUNTY—E. & F. Oil Co.'s E. L. Beck 1, 36-15-26, 6⅝ cas 2792 ft 4½ cas 2957 ft tested sw 2961 ft sd 2968 ft. Lenz et al's Johnson 2, 24-15-26, sw abn td 4700 ft recently cemtd 800 ft, 8-in cas to shut off water. Johnson 3, ne nw 24-16-26, sw abn td 2850 ft. Bullock Oil Co.'s Hervey 1, 2-15-26, ta with junk in hole td 2832 ft. East Texas O&G Co.'s Hervey 1, 2-15-26, ta 890 ft. Gusher Bend Oil Co.'s Adams 1 ,nw nw 24-14-26, 10-in 115 ft, sd 2594 ft. O'Mara et al's Person 1, 31-15-25, lcn. Fitzwater et al's Beck 1, sw se 33-15-26, 10-in 85 ft sd. Salzer & McRae's Rose 1, ne nw 9-16-26, 10-in 98 ft dry abn in gumbo td 475 ft. J. D. McRae's Smith 1, nw se 28-15-26, dk.

OUACHITA COUNTY — Belmont et al's Dean 1, 16-15-17, top red beds 2765 ft, sd junk in hole 2907 ft. Copenhaver et al's Elliott 1, se se 11-15-17 recemtd 6-in 2185 ft, td 2190 ft. Wesson & Bonner's Wesson 1, sw nw 22-15-19, 6⅝ cas 2083 ft, wo power to pump 300 ft fluid in hole td 2169 ft. J. D. Reynolds' Grayson 1, 21-15-19, 10-in 42 ft. Nacatosh 1502-14 ft cored sand 2175-90 ft, cemtd 6-in cas 2151 ft, td 2197 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, show heavy oil 567 ft, sd 2378 ft. E. R. Henderson's Lee 1, sw se 31-8s-24w, dk.

POPE COUNTY—Ark. La. P. L. Co.'s McFadden & Brooks 2, ne nw 15-9-21, 13⅜ cas 1900 ft, tested 1 mil ft gas 3285 ft, 8⅝ cas 3415 ft, 8-in 3451 ft, dr sand 4131 ft. Baird 1, se nw 11-7n-20w, 10-in 1168 ft, dr sand 2040 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Ark. Valley Gas Co.'s Turner 1, se se 27-5n-30w, lcn abn. Waldron O&G Co.'s J. G. White 1, sw nw 17-3n-29w, 10-in 225 ft, dr 1240 ft (sec hole).

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, sd after testing sw 2515 ft. Ozark Nat. Gas Co.'s A. B. Bryant 1, se ne 28-8n-29w, lcn.

UNION COUNTY—Hickman et al's Hogg 1, 35-16-17, top Graves sand 2351 ft, top red beds 2779 ft, sd in shale 3328 ft. Rice et al's Whatley 1, 7-17-15, sd 2186 ft. Southern Prod. Co.'s Wingfield 1, se nw 16-19-15, 10-in 103 ft, sd 2608 ft. Wilson & Chapman's Hadley 1, ne sw 3-18-13, 10-in 102 ft, top Nacatosh 2300 ft top Meekin sand 2550 ft, top red beds 2933 ft, sd 600 ft fluid in hole 30 per cent sw, td 3570 ft. C. H. Murphy et al's Union Sawmill 1, nw sw 18-18-13, 10-in 111 ft, top Nacatosh 2198 ft, tested sw 2190-2202 ft, tested sw 2537-52 ft, dry abn in red beds td 3615 ft.

WASHINGTON COUNTY — Taylor et al's Runny 1, 1-13-29, sd 1702 ft. Lincoln Lease Holding Synd's Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32 sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY — T. Luckett's Balcon 1, 36-7-12, sd while fsh cas td 5710 ft.

## ALABAMA

MADISON COUNTY — Tennessee Valley O&G Co.'s Fee 4, 1-4s-2e, show gas 300 ft dr limestone 700 ft (no recent report).

SUMTER COUNTY, (Livingston Dist.)—

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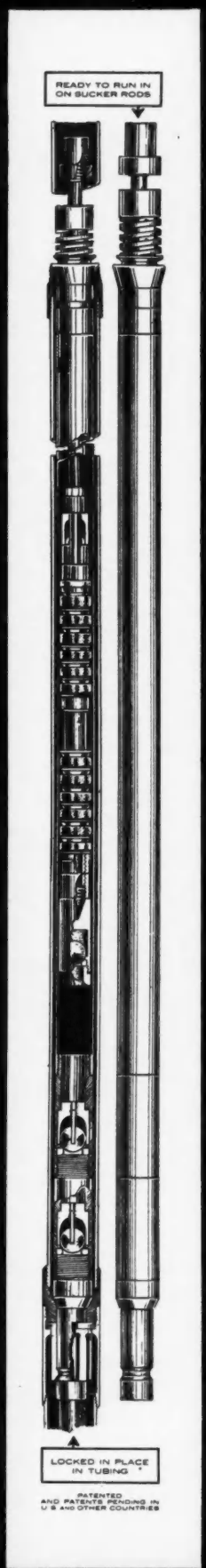


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WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd in limey shale 881 ft. Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, sd 700 ft.

## MISSISSIPPI

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| HINDS COUNTY, (Jackson)— | | |
| Gulf Ref. Co.'s School Board 1, 16-6 1e | * | 2707 |
| MADISON COUNTY, (Jackson)— | | |
| Central O&G Co.'s Cameron 1, 11-9n-1e | * | 3460 |
| COVINGTON COUNTY, (Collins)— | | |
| Miss. Gulf O&G Co.'s Pope 1, 35-8n-16w | * | 3000 |
| WEBSTER COUNTY— | | |
| Cumberland Oil Co.'s Henley 1, 15-21-11 | * | 1865 |

CLARKE COUNTY, (Quitman Dist.)—Gulf Ref. Co.'s Box 1, nw se 11-2n-15e, elev. 221 ft, 15¼ cas 105 ft 10-in 922 ft, top Midway black shale 2205 ft, top Selma chalk 2635 ft dr hard chalk 2878 ft.

CLAY COUNTY—Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev. 270 ft 13⅜ cas 1389 ft cemtd 9⅝ cas 2929 ft dr hard sandy shale 2982 ft.

COVINGTON COUNTY, (Collins Dist.)—Miss. Gulf O&G Co.'s Pope 1, nw ne 35-8n-16w, 12¾ cas 126 ft top Wilcox 2100 ft dry abn in shale td 3000 ft.

CHICKASAW COUNTY—Hightower & Golsan's Fleming 1, 20-13s-3e, sd 1562 ft.

GRENADA COUNTY—Carter Oil Co et al's Dubard 1, nw nw 18-22-4e, top Selma chalk 1787 ft top Eutaw 2612 ft arr to abn in red shale td 4012 ft (4000 ft contract depth).

HINDS COUNTY, (Jackson) — Gulf Ref. Co.'s School Board 1, ne sw 16-6-1e, elev 331 13-in cas 108 ft top Midway shale 2675 ft dry abn td 2707 ft.

JASPER COUNTY, (Bay Springs Dist).—Bay Springs Pet. Inc.'s J. H. Keyes 1, nw ne 21-2n-10e, 15½ cas 104 ft dr bro lime 719 ft.

KEMPER COUNTY, (De Kalb Dist).—W. W. Jones' Rosenbaum 1, lcn not given, lcn abn.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10-4w, rig.

MADISON COUNTY, (Jackson Dist.) — Central O&G Co.'s Cameron 1, 11-9n-11e, 10-in 201 ft 6⅝ cas 1532 ft top Midway (?) 2506 ft, junked abn 3460 ft in gumbo, due to twistoff, flowing 3000 bbls fresh water will be plugged back to 1700 ft set screen bring in as water well.

MONROE COUNTY, (Amory Dist.)—Amory Dev. Co.'s Bourland 1, sw ne 2-15-19, sd in brown sand 3007 ft. P. J. McAlpine's Cowart 1, ne sw 2-12-19, 10-in 694 ft, 8¼ cas 1276 ft, fsh td 1830 ft. Associated Royalties' School Board 1, sw se 16-15-17, sd 60 ft. Amory Pet. Corp.'s Harris 1, nw nw 18-13s-17w, elev 455 ft 10-in top Paleozoic rock 478 ft top gas sand 2324 ft 6-in 2324 ft bailer and sand line lost in hole while bailing fsh td 2350 ft in 25 ft sandy shale.

RANKIN COUNTY, (Jackson Dist).—Love et al's Muse 1, se se 32-7-4e, 12½ cas 600 ft sd in bro lime 2310 ft. Love Pet. Co.'s Moore 1, se nw 28-6-2e, sd 900 ft. Millstein O&G Co.'s Gammill-Hartfield 1, sw ne 6-5-2e, hf fluid wo 2500 ft. Atkisson et al's Valentour 1, nw nw 18-5-2e, dk.

SMITH COUNTY, (Raleigh Dist).—Pocahontas Nat. Gas Co.'s Adams Banks Lbr. Co. 1, ne sw sw 10-3n-7e, elev 425 ft 10-in 441 ft arr make ds test in Wilcox at 2730 ft claim gas show.

WARREN COUNTY, (Vicksburg Dist).—Eagle Lake O&G Co.'s Kiger 1, 9-18n-2e, dk. Dixie Pet. Co.'s Clark 1, nw nw 6-16n-5e, elev 278 ft 12½ cas 77 ft 8¼ cas 2186 ft dry in Sparta 2248 ft dr gumbo 2820 ft. Vicksburg O&G Co.'s Dornbusch 1, sw ne 8-18n-5e, sd 1600 ft.

WEBSTER COUNTY Cumberland Oil Co.'s Henley 1, 15-21-11, dry abn td 1865 ft.

WINSTON COUNTY, (Louisville Dist.)—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13n-14e, sd in red gumbo and shale 2549 ft.

YALABOUSA COUNTY, (Water Valley Dist).—J. D. Collett et al's Blackmer 2, sw nw 14-11s-4w, 12½ cas 103 ft 8⅝ cas 2426 ft dr hd sandy shale 2617ft.

## KANSAS

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| MORTON COUNTY — Hydraulic Oil Co.'s State land 1, nw se 22-34-43w, sd 3460 ft. | | |
| STEVENS COUNTY—Sidwell et al's Kelly 1, sw ne 16-34-38w, (owd) td 2651 ft c.o. | | |
| COWLEY COUNTY—Fisher et al's Hunt 1, e sw se se 11-34-3e, ru and sd. Tom Fine's Boyd 1, nw ne 32-32-4e, 12-in 1265 ft, dr 3000 ft. Roth & Farrot's Reidy 1, c sw nw ne 8-32-4e, sd 1040 ft. | | |
| HARPER COUNTY—Beeler et al's Bear 1, c ne 21-31-6w, td 1830 ft sd. | | |
| FORD COUNTY—Carter et al's Community-Everett 18, c ne 22-29-21w, (6000 ft test) dr 525 ft. | | |
| SEDGWICK COUNTY — Buck et al's McNanaman 1, c ne nw nw 2-20-1e, dr 2070 ft. | | |
| FORD COUNTY—Swain et al's Kenthorn 1, c nw 21-25-24w, 5-in 4600 ft, dr 4700 ft. | | |
| STAFFORD COUNTY — Rosenthal, Stanolind & Amerada's Gray 1, c ne 11-24-13w, ru. | | |
| RENO COUNTY — Shell & Continental's Blake 1, sw se se 23-23-4w td 1200 ft fsg. | | |
| HARVEY COUNTY—Empire & Shell's Showalter 1, nw se 23-23-2w, dr 2660 ft. | | |
| MARION COUNTY—Maidwell's LaMaster 1, nw c 31-22-4e, sd 650 ft. | | |
| COFFEY COUNTY—Hegberg et al's Kroft 1, se sw se 30-22-14e, 10-in 818 ft, td 1300 ft sd. Roberts et al's Hay 1, sw se nw 32-22-15e, td 1250 ft sd. | | |
| BARTON COUNTY—McCool et al's Tsern 1, c sw se ne 12-20-11w, sd 1600 ft. | | |
| RICE COUNTY—Cress et al's Sharp 1, se ne 13-20-10w, 6-in 3140 ft dr 3196 ft. | | |
| RUSH COUNTY — Dewey & Mitchell's Greenwalt 1, c sw 17-19-16w sd 1570 ft. | | |
| RICE COUNTY—Skelton Oil's Ott 1, c se | | |


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*Superintendent of Central Heating, The Detroit Edison Company,*

*and*

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se 16-19-14w, sd 2065 ft. Deitrick & Langston's Purcell 1, nw c 33-19-9w, rig.

McPHERSON COUNTY — Henderson & Holden's Sommerfield 1, c ne sw 23-19-1w, sd 3227 ft.

LYON COUNTY—Griffith et al's King 1, nw c 8-19-10w, 12-in 910 ft sd.

BARTON COUNTY—Syndicate Oil's Boertz 1, c nw se ne 13-18-12w, sd 1820 ft.

RICE COUNTY — Allison & Fitzwilliams' Blake 1, ne nw 9-18-10w, rig. McFadden & Shell's Jennings 1, c sw ne nw 29-18-6w, pb to 1130 ft.

NESS COUNTY—Gypsy's Coleman 1, c sw ne 25-17-25w, 8-in 3860 ft, 6-in 4158 ft dr 4165 ft.

ELLSWORTH COUNTY — Aylward et al's Stratman 1, c se nw se 1-17-10w, sil 1 3265 ft s.o. rng liner. Gilmore Oil Co. et al's Sturn 1, nw sw 21-17-9w, td 2445 ft, ur 10-in 2075 ft.

MORRIS COUNTY—Urschell et al's Bersuch 1, c nw se nw 10-17-7e, ru sd.

ELLSWORTH COUNTY — Alladin et al's Stoddenberg 1, c sw 22-15-10w, sd 1130 ft.

SALINE COUNTY—Stanolind et al's Martin Community 1, ne se se 3-16-3w, dr 305 ft.

MORRIS COUNTY—Hankenson et al's Cessnum 1, sw se 24-16-9e, sd 900 ft.

FRANKLIN COUNTY—Fields et al's Usher 1, se c 35-16-17e, sd 400 ft.

ELLSWORTH COUNTY — Milton et al's Kaster 1, se ne 6-14-9w, td 1740 ft fsg tools.

RUSSELL COUNTY—Hall et al's Mills 1, se sw se 30-14-13w, dr 540 ft.

ELLSWORTH COUNTY — Hershey et al's Schaltz 1, c ne 9-14-8w, sd 400 ft.

OSAGE COUNTY—Riggs-Smith's Wood 1, c se nw 31-14-15e, 10-in 1050 ft sd.

RUSSELL COUNTY — Austin Drlg. Co., Rockefeller 1, se c, 6-13-12w, 3320-25 ft, hfw, td 3374 ft.

SALINE COUNTY—Twin Mounds Oil Co.'s Weis 1, c w½ ne nw 30-13-4w (owd) 19-in 1010 ft, sd 2710 ft.

DICKINSON COUNTY — Severs et al's Livingood 1, ne sw 13-13-2e, sd 3850 ft.

RUSSELL COUNTY—Gilbreath et al's Bratton 1, c ne 33-11-13w, 8-in 2485 ft, td 2814 ft, sd.

GRAHAM COUNTY—Schleimer et al's Clark 1, c sw ne ne 11-9-25w, rng 8-in 3715 ft 6-in, 3848 ft, dr 3974 ft.

CLAY COUNTY—Nebraska Oil's Tivier 1, sw c 19-8-9e, sd 2390 ft.

SHERIDAN COUNTY—Flo et al's Shoemaker 1, se sw sw 27-7-26w, dr 875 ft.

ROOKS COUNTY—Empire's Holsman 1, c sw ne se 17-7-20w, dr 1925 ft.

WASHINGTON COUNTY—Simcox's Penwell 1, nw s ene 16-3-3e, sd 1720 ft.

RAWLINS COUNTY—Danciger et al's Unknown 1, sw c 3-2-35w, sd 2700 ft.

## OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros.' Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 9, Mummer et al's Sornick 1, nw c se, hfw 2070-2170 ft, sd 2700 ft. T. 26n, R 1w, Sec. 32, Boucher et al.s Jefferson 1, ne c sw, dr 3502 ft.

HARPER COUNTY—T 25n, R 20w, Sec. 12, Empire's Bruce 1, sw c ne ne sw, td 7935 ft, pb 7500 and shot. No results, will plug.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Collmer 2, ne c se ne sw, lost tools, sd 5640 ft.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey's Acre 1, c sw ne, show gas 5298-5303 ft, dr 5330 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9. Pulse, Beamer et al's White 1, se c nw, sd 5850 ft.

NOBLE COUNTY—T 21n, R 1e, Sec. 12, Barnsdall's Carrie Miksch 1, nw c sw, hfw 4923-26 ft, will abn.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co.'s Phillips 1, c nw sw, hfw 4535-37 ft, sd 4600 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al's Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T 28n, R 3e, Sec. 24, Summitt Drlg. Co. et al's Hays 1, nw ne nw, sd 1950 ft.

OSAGE COUNTY—T 28n, R 7e, Sec. 4, L. G. Stanley 1, se c sw, sd 1920 ft.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al's McFadden 1, ne c sw, rig.


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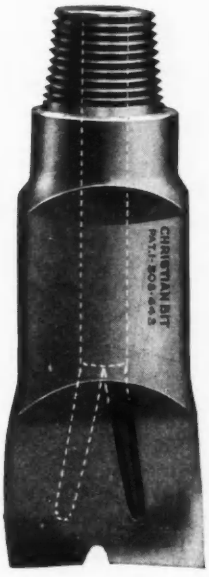


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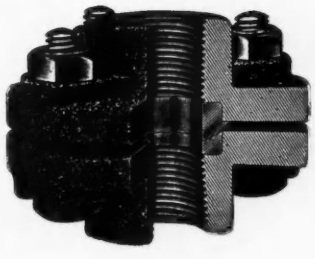

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T 22n, R 5e, Sec. 2, Cherry et al, Milsap 1, se c sw, sd 1750 ft. T 20n, R 5e, Sec. 6, W. A. Rookstool, Berry 1, nw ne sw, sd 1951 ft.

LINCOLN COUNTY—T 13n, R 6e, Sec. 8, Atlantic, Beebe 1, sw ne sw, lcn.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepperd et al, Shepperd 1, se nw sw, sd 3690 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al, McDuff 1, sw nw se, fsg tools 5687 ft. T 8n, R 14e, Sec. 14, C. O. Cannady et al, Smith 1, sw c ne nw nw, rig and tools. T 7n, R 14e, Sec. 5, C. O. Cannady et al, Travis 1, c sw ne, rig. T 6n, R 15e, Sec. 7, Perrine et al, Ringling 1, nw c ne, spudded and sd.

LATIMER COUNTY—T 6n, R 18e, Sec. 4, Choctaw Gas Co., Weaver 1, c ne nw, cemtg 8-inch at 2365 ft. T 6n, R 19e, Sec. 16, P. English et al, Weaver 1, c nw se, sd 300 ft.

ATOKA COUNTY—T 1n, R 15e, Sec. 9, Edgerton et al, Rolland 1, c nw, sd 700 ft.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff, Trustee, St. Joseph 1, sw c ne sw se, sd 6700 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, C. B. Bunte et al, Bruner 1, se c nw, rig.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Ute Oil Co. et al, Williams 1, c sw, td 3658 ft, centg hole. T 11n, R 26w, Sec. 4, J. J. Rook et al, Davis 1, c nw ne (owd), sd 2956 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey, Robinson 1, c ne nw, sd 150 ft.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al, Blocker 1, nw c, dr 1600 ft. T. 8n, R 18w, Sec. 21, Burns & Prince, May Dock 1, sw c, sd 150 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good et al, Cliffel 1, nw c, sd 1615 ft. T 7n, R 21w, Sec. 23, H. A. French et al, Murphy 1, sw nw se, C.O. 1500 ft.

STEPHENS COUNTY—T 1n, R 8w, Sec. 25, Ross Southard, McKinley 1, ne c, sd 1063 ft.

HUGHES COUNTY—T 5n, R 11e, Sec. 15, J. J. Wright, Roberts 1, se c sw, 2M gas 915-18 ft, sd 1645 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee Oil Co., Phillips 1, ne c sw, lcn.

COAL COUNTY—T 2n, R 8e, Sec. 10, Whitney et al, Miller 1, se c ne (owd), sd 760 ft. T 1n, R 8e, Sec. 35, W. E. McCraw O&G, Stirring 1, ne c se, dr 500 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al, Guinn 1, sw c, show gas 360-72 ft, sd 500 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla Drlg. Co., Anderson 1, se ne se, sd 2806 ft.

BRYAN COUNTY—T 6s, R 7e, Sec. 14, W. A. Johnson, Ussery 1, se c, sd 325 ft. T 7s, R 10e, Sec. 8, Bryan Oil Co., Childs 1, ne se sw, sd 660 ft.

### SOUTHERN CALIFORNIA

ALHAMBRA—Fred H. Hammer's Huntington Land Co. 1, 24-1-13, sd 3395 ft.

BASSETT — Huntington Central Oil Co.'s Pellissier 1, 34-1-11, rig.

BELL—Cudahay Community Oil Ass'n's No. 1, 30-2-12, dr shale 1333 ft.

CORONA—Western Gulf's Abacherli 1, 12-3-8, dr gray sand 2439 ft.

CULVER CITY — Olympic Oil & Realty Co.'s No. 1, 14-2-15, dr shale 5000 ft.

DOMINGUEZ—Tenacity Oil Co.'s Del Amo 1, 11-4-13, swabbing for test, td 8500 ft, well produced water and trace of oil.

FULLERTON — Standard's Bastanchury 1, 21-3-10, dr hard sand 8150 ft.

HAWTHORNE—Jim Thorpe's No. 1, 10-3-14, dr shale 2800 ft.

HERMOSA BEACH—Calico Royalty Series' Calico 3, 6-4-14, dr shale 2200 ft E. S. Cone's No. 1, 6-4-14, lcn. Hermosa Exploration Co.'s No. 1, dr shale 500 ft. Smith Pet. Co.'s No. 1, 6-4-14, rigging up rotary. R. C. Thomas' No. 1, 6-4-14, lcn. Tulsa Oil Co.'s Hermosa 2, 6-4-14, dr shale 200 ft. Westwood Pet. Co.'s No. 1, 6-4-14, dr shale and hard sand 1828 ft.

NEWHALL—Consolidated Oil Co.'s Hammond 1, 8-3-16, bailed to bottom, td 2605 ft. York & Smullin's Clampitt 6, 13-3-16, dr oil sand 1100 ft.

NEWPORT—Nuoil Co.'s No. 1, 29-6-10, dr


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shale 1378 ft. Standard's Irvine 1, 26-6-10, dr shale 3955 ft.

OCEAN PARK—Hines Pet. Corp.'s Happy Days 1, 8-2-15, dr shale 4400 ft.

OLIVE—Texas' Olive Community 1, 7-4-9, dr shale 3616 ft.

PLAYA DEL REY — Mesmer City Realty Co.'s No. 1, 24-2-15, dr shale 2700 ft. West Port Oil Co.'s No. 1, 27-2-15, re-dr to 5590 ft.

PUENTE—Rio Hondo Oil Co.'s Rowland 1, 14-2-10, dr 3736 ft. Rucker & Croul's Grazide 2, 22-2-10, dr shale 1926 ft.

ROSEMEAD—Rancho Oil Corp.'s Harmon 1, 30-1-11, dr hard sand 5155 ft.

REPETTO HILLS—Texas' F. M. 1, 4-2-12, dr broken sand 2450 ft.

SAN FERNANDO VALLEY—San Val Oil Co.'s No. 1, 14-1-16, dr 2065 ft.

WILMINGTON—York & Smullin's Watson 1, 29-4-13, dr shale 2385 ft.

## NORTHERN CALIFORNIA

| Company, Well and Location | | Initial Production Bbls. | Depth |
|---|---|---|---|
| VENTURA COUNTY— | | | |
| Olympic Corp.'s Calabasas 1, 18-1-17 | * | | 5685 |
| SANTA BARBARA COUNTY— | | | |
| Prairie Oil & Gas' El Capitan 1..... | * | | 4383 |
| George W. Johnson's Duncan 1, 19-4-27 ..... | * | | 3970 |

### KERN COUNTY

BELRIDGE—Belridge Oil Co.'s No. 27-64, dr shale 2650 ft; No. 35-8, dr shale 3800 ft; 27-8, 35-33, 35-48 and 35-49 are sd 3731 ft, 3982 ft, 4761 ft and 1055 ft, respectively. Continental's Result 2, 36-27-20, dr shale 500 ft. General Pet.'s Berry 1, 30-28-21, dr shale 3900 ft. Lincoln Drilling Co.'s Victoria 1, placing on pump, td 740 ft. Ohio's Bloomer 1, 36-27-20, plugged to 5900 ft, making production test. Reward Oil Co.'s Associated 4, 34-27-20, dr shale 4460 ft. Standard's McPhail 2, 36-27-20, conditioning hole, td 5045 ft. Texas' Martin 1, 22-27-20, dr shale 5050 ft. Union's Belridge 17, 36-27-20, swabbed water, will recmt, td 5540 ft. K. C. Wallace's No. 1, 32-29-21, dr shale 4215 ft.

BLACKWELL CORNER—F. B. Langstroth's No. 1, 14-26-19, lcn. E. J. Miley et al's No. 1, 17-26-19, lcn.

BUENA VISTA HILLS — Federal Drilling Co.'s No. 6, 20-31-24, swabbed water, td 5367 ft, fsh for bailer.

BUTTONWILLOW — Wilshire Oil Co.'s Nordon 1A, 7-29-24, dr shale 7005 ft.

CARRIZZO PLAINS—Panorama Oil Co.'s Panorama 1, 7-31-21, re-dr 2300 ft. Tray-El Oil Co.'s No. 1, 7-32-22, sdtr bit, td 1205 ft.

DELANO — Chanslor-Canfield Midway's Villard 1A, 31-25-28, may abn, td 2555 ft.

DEVIL'S DEN—Tom Hannah's No. 1, 25-25-18, dr shale 2828 ft. Standard's Alferitz 1, 14-25-18, dr shale 2569 ft.

MOJAVE—J. B. Harding's No. 2, 5-10-10, lcn.

SEMITROPIC—Shell's Williams 1 ,17-27-23, co after shooting drill pipe, td 9702 ft, swabbing water.

TEMBLOR HILLS—Kent and McDonald's No. 1, 3-32-22, sr 1700 ft.

WASCO—Cities Service Pet. Co.'s Prospect 2, 16-28-24, dr shale 700 ft.

WEED PATCH—Alpine Oil Co.'s Di Giorgio 1, 13-31-29, dr 700 ft. Mohawk Oil Co.'s Earl 1, 4-31-29, rigging up; Wharton 1, 32-30-29, dr 5978 ft. Osborn & Colter's Shell-Duff 1, 15-30-29, rig. Shell's Morris 1, 32-30-29, dr shale 4515 ft; Porter 1, 29-30-29, dr shale 6065 ft; Porter-Day 1, 29-30-29, dr shale 7878 ft.

### SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp.'s Augur 191-1, 24-4-29, co 4191 ft, will try for water shutoff.

CUYAMA—Hart Pet. Co.'s No. 1, 27-10-26, rigging up.

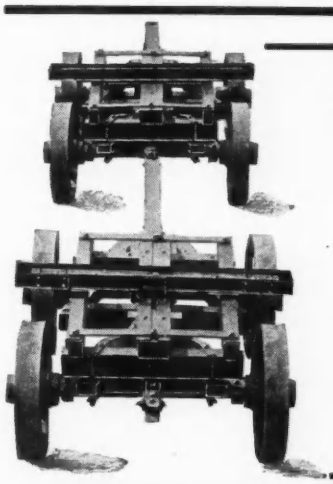
GATO RIDGE — Barnsdall's Tognazzini 1, 9-8-32, dr hard shale 6100 ft.

GOLETA—General Pet.'s More 3, dr gray sand 4620 ft. George W. Johnson's Duncan 1A, 19-4-27, dr shale 900 ft. Southern California Drilling Co.'s Bishop 1, 12-4-29, rig.

ORELLA—General Pet.'s Erburu 10, dr shale 600 ft.

PURISIMA — Vaqueros-Major Oil Co.'s Union Annex 3, dr shale 3165 ft.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, fsh for bit, td 5930 ft.

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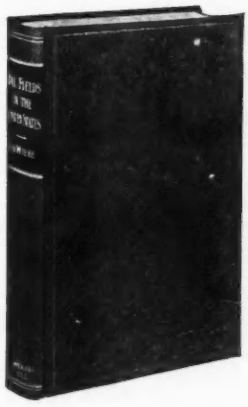

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### VENTURA COUNTY

BARDSDALE—Ross & Associates' No. 10, 12-3-20, rigging up rotary.

FILLMORE—Associated's Young 1, 16-4-20, lcn.

HOPPER CANYON — Bardeen Pet. Co.'s No. 1B, rigging up.

OJAI—Drednaught Oil Co.'s Canet 1, changing to heavier rotary, td 2120 ft. Knudsen and Schmidt's No. 1, 12-4-23, sd 965 ft.

OXNARD — Magu Synd.'s Utt 1, dr hard shale and shells 1755 ft.

RINCON—Chanslor-Canfield Midway's Hobson A2, 23-3-24, dr shale 8850 ft. Continental's Grubb 1, 23-3-24, dr 600 ft.

SANTA PAULA—Belga-American Oil Co.'s No. 1, 22-4-21, rigging up cable tools.

SESPE — Merchants Pet. Co.'s Cochran 1, 1-4-20, cmt 10¾-in cas 840 ft, td 900 ft. Superior's Kirtlan 14-1, 15-4-21, dr shale 6005 ft.

TIMBER CANYON—Petro Well Producing Co.'s No. 4, 18-4-20, sd 1100 ft.

### MISCELLANEOUS

FRESNO COUNTY — Associated's Mitchell 1, 22-21-15, dr gray sand 4350 ft.

KINGS COUNTY — Irma Investment Co.'s Brown-Dudley 1, 7-23-20, rigging up rotary. Valley Exploration Co.'s Brennan 1, 20-23-23, making cas test, td 3710 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, dr shale 6400 ft.

SAN LUIS OBISPO COUNTY—Paso Robles Synd.'s Emerick 1, 34-27-11, fsh for tools 3970 ft. Continental's Hellman 1, 26-25-11, dr hard shale 4935 ft.

SANTA CRUZ COUNTY — Wellton Oil & Gas Co.'s Galletly 1, dr cmt to make production test, td 2880 ft.

TULARE COUNTY—Big Four Drilling Co.'s No. 1, 29-23-27, co 4330 ft. Ducor Petroleum Co.'s Zimmerman 1, 14-24-27, re-dr 2155 ft. George Knopp's No. 1, 20-22-27, dr shale 450 ft. W. D. McCoy's No. 1, 35-21-27, re-dr 550 ft. C. E. Pettingill's Campo Verde 1, 15-22-27, dr shale 440 ft. Inland Valley Oil Co.'s Smith-Rea 1, 24-17-24, co 2060 ft.

## COLORADO

ADAMS—N. M. Slatt's 1, se 27-26-64w, dr 2596 ft.

ARAPAHOE — McDebb Drlg. Co.'s Fitzsimons 1, 7-45-55, dr 5757 ft. Merrett et al., U. P. 1, nw 17-5-65, stand 1600 ft, hfw.

BACA—A. R. Jones Oil & Optg. Co., Boice Cattle 1, 22-34-42w, stand 4760 ft.

EL PASO—Utemore Synd., Cannon 1, ne 10-16s-66w, stand 1100 ft.

GRAND—Oil Mineral Lands, Inc., McElroy 1, sw 14-2n-81w, dr 110 ft.

HUERFANO——Parker Club, Fee 1, se 4-28s-68w, sdtr 5 3/16-inch cas, td 4116 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-69w, dr 3881 ft.

LAS ANIMAS—Oklahoma Drlg. Ass'n, Radcliffe 1, ne 28-28-52, sd 100 ft.

LA PLATA — McGarr Pete Co.'s Pinion Mesa 1, ne 34-33n-12, lcn. Klem Pete Corp.'s Olbert 1, se 9-25n-12w, stand 3125 ft. Murchison Oil Co., Doescher 1, nw 29-33n-12, sd 1225 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, dr at 3380 ft.

MOFFAT — Mtn. Fuel Supply's State 2, tract 37-12-100, resum 2202 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, sd 2960 ft.

MONTEZUUMA—G. H. Talcott et al., McElmo 1, 7-35n-16w, dr 110 ft.

MONTROSE — Uncompahgre O&G Co.'s Colo. Title & Trust 1, 27-50n-10w, cas at 50 ft.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-57w, co 4990 ft.

PUEBLO—Anchor Oil Co.'s Easley 1, sw 35-22s-57w, wtg cas 520 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-9s-76w, dr 1819 ft. So. Park O&G Co.'s Eache 1, ne 6-9s-76w, sd.

ROUTT—Ingersoll et al's Omholt 1, 29-4n-87w, sd 115 ft.

WASHINGTON—Middlesmist Oil Co.'s Middlemist 1, se 14-4-56, stand 1510 ft.

## NEW MEXICO

CHAVES—Warman Oil Trust, Siebert 1, ne 27-13-24, dr 2100 ft. Neal et al, Russell, nw 21-14s-25e, dr 1716 ft.

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, cas at 3010 ft.

HARDING—Milwaukee Synd., Kerlin 1, se 34-21n-30e, dr at 464 ft.

LUNA—Angelus Oil Mining Assn., 1, se 20-21s-10w, dr 6076 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18-9w, sd 3255 ft. Wms et al's A.T.S.F. 1, se 19-18n-8w, stand 1900 ft. United Kern Pete, Inc., 1, sw 1-18n-11w, lcn. Dysart et al, Dysart 2, ne 14-14n-10w, dr 1316 ft.

MORA — Santa Fe Diox-Ice Co.'s Wagon Hound 1, ne 14-19-21, dr 90 ft.

OTERO—Ernest et al's 1, se 20-25s-7e, wtg for equip at 1328 ft.

RIO ARRIBA—Berrenger et la's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pete Co.'s Gov't 1, se 14-30n-7w, sd 250 ft. Governador Oil Co.'s 1, se 12-29-7w, dr 870 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, stand 1750 ft. Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, dr 2404 ft. Childers Dr. & Pr. Co.'s Westwater 2, nw 23-37-16w, dr 2490 ft. Rio Grande Dev. Co.'s 2, 9-29-11, ream 6⅝ to 1380 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, prep to sidetrack dr cipe, td 4730 ft. J. B. Witt O&G Co.'s Magmun 1, se 33-29n-11w, lcn. San Juan Leaseholds Bowman 3, ne 30-30-15, dr 2658

**HEYDRICK'S NEW MAPS**
WEST TEXAS
County Maps — Combination Maps
*Descriptions and prices on application*
**Heydrick Mapping Co.**
WICHITA FALLS, TEXAS

THE FT. WORTH LABORATORIES

Field Gas Testing. Analysis of oil field brines, gas minerals and oil.
Sell Thermometers, Hydrometers and Laboratory Glassware.
F. B. Porter, B. S., Ch. E., Pres.
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**EASILY OPERATED BY ONE MAN . . .**
*Simplest.. Fastest .. Safest*
*One of the 148 types of Drilling and Fishing Tools made by*
**ACME FISHING TOOL CO.**
*at Parkersburg W. Va.*
*Distributors and Dealers in all active fields*

**ACME B & R WIRE LINE CLAMP**

ft. Reserve Oil Co., Reserve 3, se 36-22n-14w, dr 645 ft.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2340 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, dr 3440 ft. Cibola Pete Co.'s Crown 1, se 9-13n-14e, sd 840 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 12-12n-22e, prep to res at 1415 ft. Kull et al, Cherryvale 1, ne 34-17n-21e, fsh 470 ft.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, prep to res 1643 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-17-7e, dr 1440 ft. R. C. Oswell, Permit 2, nw 34-30n-11w, ready to spud.

VALENCIA—Acme Oil Co.'s N. M.-Ariz. Land Co.'s 1, ur to 4958 ft. Harlan et al's Harlan 1-A, 5-6n-2e, prep to resume 6140 ft.

## MONTANA

BIG HORN—Continental Oil Co., Lynde 2, ses¼ sec 21-6s-35e, sd 3405 ft, probably to abn.

CARBON—Spomont Pete Co.'s Cruse 1, 32-6s-18e, dr 100 ft.

CASCADE—Andover Oil Co.'s Floweree 1, se 20-21-2w, sd 1405 ft. Lone Star Oil Co.'s McLean's 2, se 13-21-3e, dr bel 150 ft.

CHOTEAU — Northern State Oil Co.'s Woodward 1, sw 20-14n-24e, ream 6-inch to sow, 2845 ft. Melton Corp., 24-21n-17e, dr 2850 ft. Poyman Oil Co., 24-19-11e, to res 200 ft.

GLACIER—Fulton Pete Corp.'s Blackfoot 1, ne 28-36n-12w, co to bottom at 1240 ft. B. & H. Oil Co.'s Haines 1, se 2-34-6w, stand, td 2762 ft. Jeffries-Hoerr's Dawson 1, ne 7-31-12w, dr 2900 ft.

GOLDEN VALLEY—Texas-Pacific's 1, sw 21-8s-21e, dr bel 3750 ft. J. F. Dealey et al's 1, ne 28-5n-22e, to resume.

LIBERTY—Northland O&G Co.'s Yurman 1, 32-33-5e, resum 3475 ft. Sunburst, McLaren 1, se 9-37-6e, sd 3115 ft. C. G. Howard, Schoonover 1, nw 18-36-6e, rigging up.

ROSEBUD—Prairie O&G Co., 1-x, 26-10-39e, cem 12½-inch at 2415 ft.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand 150 ft.

TOOLE—Liquid Gold Oil Co.'s Roberts 1, ne 25-36-12, bldg new rig, td 2150 ft. International Royalty Holding Co.'s Henry 1, sw 26-35-36, ur pipe to dd 2650 ft. A-1 Pete Co., se 24-36-1e, wait pipe 1555 ft.

YELLOWSTONE—Peter Antonioli, 21-2n-25e, dr bel 1200 ft.

## WYOMING

BIG HORN—Westland Oil, Inc., 24-54-95, gas at 510 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pete Co.'s 1, 7-87-97, sd at 4080 ft with show of oil.

CARBON—Midwest Refining Co., U. P. 1, 27-11-81, sd 1810 ft. Pete Expl. Co. of Calif. 29-23-89, dr 2500 ft.

CONVERSE—Converse O&G Co., 27-33-72, sd 1410 ft. Pioneer Oil Co., 5-31-70, to dr new test.

FREMONT—Texas Prod. Co.'s State 1, 36-44-95, stand cem, td 4485 ft. P. & R. 1, 33-34-92, sd 4906 ft. Yellowstone Oil Co.'s 1, 15-39-92, dr 600 ft. Ward O&G Co., 28-34-90, gas show 1500 ft. Wiebolt et al, 2-35-99, dr 1250 ft in red beds.

JOHNSON — R. C. Tarrant et al, 4-43-2, dr bel 2150 ft.

LINCOLN—Mountain Oil Corp.'s 1, 36-25-116, td 1500 ft. Wyo. Prod. Co., 14-42-113, dr bel 1225 ft.

NATRONA—Summit Oil Co., 21-33n-80w, sd 1220 ft, wait equip. Midwest's 11, nw 32-34n-77, stand 5340 ft. Cuyler Oil Co., 23-36n-85w, dr 950 ft. Golden West Oil Co., 36-36-81, ready to res 1242 ft. Midwest's Midway 1, ne 23-35n-79w, dr 5800 ft.

NIOBRARA—West Virginia Synd., 7-35-62, td 987 ft, cas trouble.

PARK—Resolute Oil Co., 17-57-101, dr up bailer 8345 ft.

SWEETWATER—Vermillion Oil Co.'s 1, se 16-12-99, co 3465 ft.

UINTA—Park City O&G Co., nw 6-15-113, dr bel 2400 ft.

WASHAKIE—Dakota-Wyoming Oil Co., ne 24-47-90w, small show 200 ft to be cased off. Ohio Oil Co., lot 14, 19-45-92, 15½-inch cem at 782 ft, dr water wells.

WESTON—LeFaivre Oil Synd., se 29-45n-68w, prep to cem 15½-inch at 1000 ft.


**ANNOUNCING our service to East Texas Operators**

Three New Yards Opened at KILGORE, SOUTH KILGORE and TURNER (two miles from JOINERVILLE) handling strictly LONG LEAF PINE LUMBER.

Since the early days of Humble and Goose Creek fields we have been supplying oil companies DERRICKS, TIMBERS, ENGINE FOUNDATIONS, STANDARD RIGS, etc. . . . Rough Dressed Building Lumber and Materials, as Nails, Guy Wire, etc.

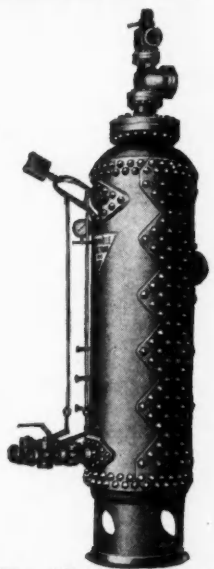
*"We Know Your Needs and Talk Your Language"*

**ROBERTSON-MacDONALD LUMBER CO.**

SAN JACINTO TRUST BUILDING — HOUSTON, TEXAS
L. D. 120

Phone or wire us your orders, which will have prompt attention at lowest possible prices.

**HIGH PRESSURES Built This Trap!**



The "Kettleman Type" Gas and Oil Separator

For years the oil operators of the world have demanded that a gas trap be built that would handle high or low pressures with absolute safety, and with an increased capacity per given size . . . The Trumble "Kettleman Type" Oil and Gas Separator is the realization of this demand: an answer that has already proved beyond a doubt the greatest gas trap development in recent years.

*There's a new catalog just off the press describing the "Kettleman Type" Separator. May we send you one?*

**TRUMBLE "Kettleman Type" Oil & Gas SEPARATORS**

**TRUMBLE GAS TRAP COMPANY**

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MASSY LIMITED
35 Marine Square, Port of Spain

756 SUBWAY TERMINAL BUILDING
LOS ANGELES, CALIFORNIA
*Cable Address: Trumco, Los Angeles*

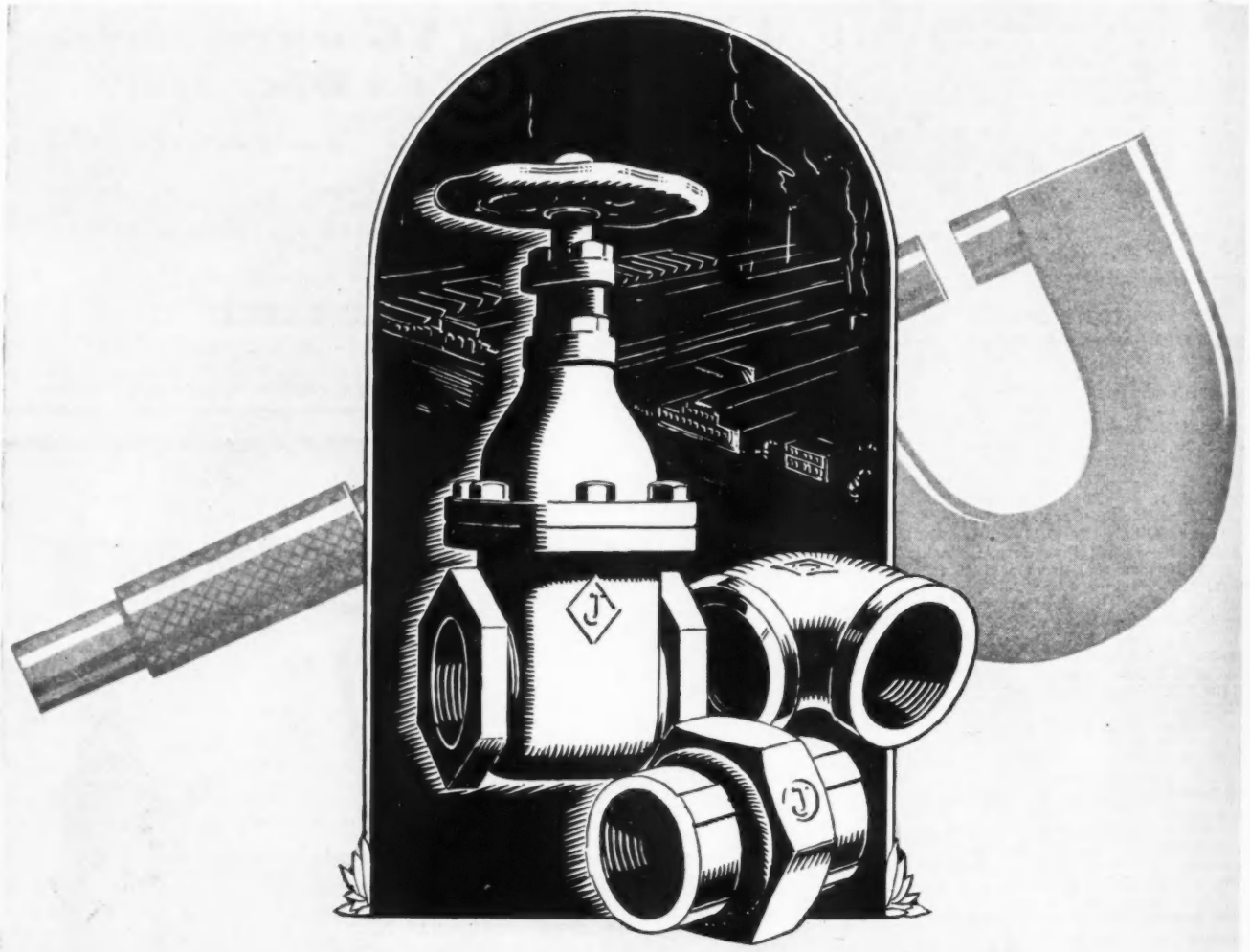
*Venezuelan Representative*
S. B. SCHNITTER
Apartado 84, Maracaibo

TRUMBLE GAS TRAP CO., 756 Subway Terminal Bldg., Los Angeles, California.

Gentlemen: Please send me complete information on your "Kettleman Type" Separator.

Name ..... Position .....

Company ..... Address .....



# TESTS···TESTS···TESTS·

## They Cost Money and Consume Time but they Are Your Assurance of a Perfect Product

VISITORS to the JARECKI plant are impressed by many things but by none so strongly as the comprehensive system of testing..... The metal is examined by experienced eyes as it comes from the foundry and mill..... Every manufacturing operation is supervised by alert individuals who turn back all but perfect jobs..... Most important, the finished product is tested by apparatus specially designed by JARECKI to duplicate actual conditions..... Air tests, steam tests, water tests—each far beyond the working pressure ratings of the product..... Is it any wonder that *every* JARECKI Valve and Fitting is a perfect product, ready for long, trouble-free service?

Jarecki
MANUFACTURING COMPANY

General Office—St. Louis, Mo. Home Office and Factory—Erie, Pa., U. S. A.

*Branch Stores at all important places in the Oil Country.*

*District Offices* { Pittsburgh, Pa.; El Dorado, Kan.; Tulsa, Okla.; Newark, Ohio; Eastland and Dallas, Texas; Lawrenceville, Ill.

# New Equipment for the Field

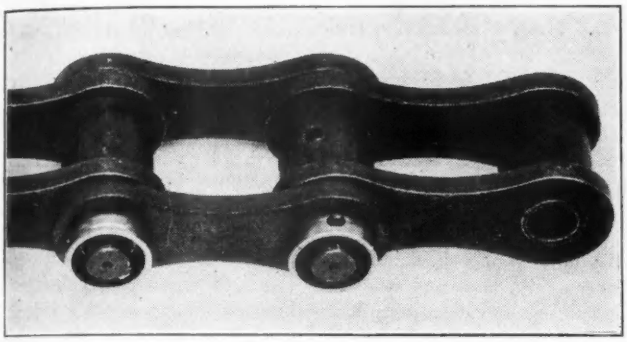
## MACHINERY - TOOLS CATALOGS - BOOKS

▼ ▼ ▼

### Deep Well Super Service Chain

**Baldwin-Duckworth Chain Corporation**

Baldwin-Duckworth Chain Corporation, Baldwin division, Worcester, Massachusetts, has issued Bulletin 37 describing the new Baldwin deep well super service chains 1030 SS and 1240 SS, which were exhibited at the Oil Equipment and Engineering Exposition in Los Angeles, March 16-20.



*New Baldwin Chain*

These chains embody the well-known Baldwin straight side bar construction, alloy steels being used throughout, the links and rollers heat treated, the pins and bushings case-hardened and afterward ground to exact size. The pin is of five per cent nickel steel, keyed into one of the side bars and press fitted into both.

In addition to the above Baldwin features, there is the new solid cotter and patented retainer or cup, taking the place of ordinary cotter pins previously used. This offers easy assembly and disassembly and is used to prevent shearing of cotters.

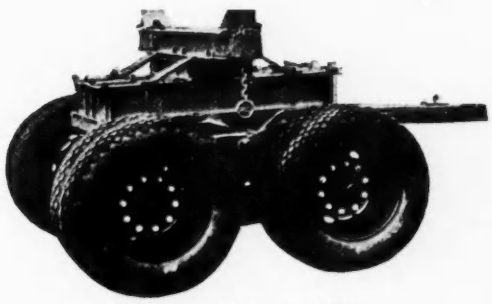
Baldwin-Duckworth Chain Corporation will supply upon request, a copy of the broadside on Baldwin deep well chains as well as furnishing a copy of Bulletin 27.

### All-Steel Trailer

**Martin Wagon Company**

Martin Wagon Company, Lufkin, Texas, manufacturers of truck bodies and trailers for the oil industry announce the manufacture of an all-steel, four-wheel trailer, equipped with eight heavy duty tires, the frame of which is reinforced to withstand the heavy loads of conveying large quantities of pipe and oil field boilers for which purpose it is commonly used by oil companies and contractors throughout the industry.

The axle of this new Martin trailer is of the highest quality, hand forged alloy steel and is equipped with Timken roller bearings. The Martin trailer is equipped with the three-point suspension feature with rocking bolster effect over the front axle which permits easy moving over rough and uneven surfaces without strain or cramp of frame. Provision is also made for the front axle to turn



*Martin All-Steel Trailer*

sufficient to enable the trailer to follow the truck around curves or make turns without skidding wheels or wearing tires. The Martin trailer is made in four or two wheel sizes for either high pressure or balloon tires.

In addition to trailers of various capacities, the Martin Wagon Company also manufacture the Martin eight-wheel wagons, and truck and van bodies of all sorts. A completely descriptive catalog will be gladly mailed upon request.

### Ball and Socket Pillow Block

**Link-Belt Company**

Link-Belt Company, Chicago and San Francisco, recently announced the new Link-Belt Timken ball and socket pillow block, which, designed several years ago, has since been improved and perfected and service proved in practically every type of service.

*Link-Belt Pillow Block*

These pillow blocks are designed to fit any good grade of commercial shafting, from 1 7/16 inches diameter to the largest size, without special fittings or the use of appliances.

The pillow blocks use pressure lubrication, making them practically dust tight. The grease is forced in at the center and out at the shaft openings, thus keeping dust and grit out of the bearing by forming a grease seal at the top.

Stocks of these pillow blocks are maintained at strategic points through the country.

# Manufacturer and Supply Dealer Notes

▼ ▼ ▼

Hughes Tool Company's management at Houston announces the acquisition of manufacturing and marketing rights of the Brown safety tubing head, previously manufactured by Gray Specialty Company, Houston.

This safety tubing head, designed and patented by C. C. Brown, permits full operation of the master gate valve after the well is tubed, and has been used for more than a year in high pressure and medium pressure fields. More than 200 of these heads are in use in the Van, Texas, field alone.

In securing the manufacturing and sales rights of this product, Hughes Tool Company has materially rounded out its line of specialized oil well equipment, Hughes valves having been widely used to make up Christmas trees on which the Brown safety tubing head has been the base in the past year.

*Brown Safety Tubing Head*

Hereafter the name of this equipment will be Hughes-Brown safety tubing head. The same quality of material, workmanship and shop tests that enter into the manufacture of Hughes rock bits, core bits, tool joints and valves will be incorporated in the production of the newly added product. A suitable stock of these heads is being built up.

Hughes Tool Company will furnish further information on the safety tubing head upon request to the Houston office.

---

Mission Sales Company, Houston, Texas, manufacturer of Mission rotary slips and the Mission slush pump valve and exclusive distributor of the Kibele slush pump piston, announces an increase of its sales force in the new East Texas territory, effective March 15.

C. K. Stillwagon, who served the company as field representative for a number of years in the North Texas, Panhandle, and Lea County, New Mexico area, and who two months ago was transferred to Tyler, Texas, has been appointed East Texas district sales manager, with headquarters at 316 West Ferguson Street, Tyler. Johnnie Foster, formerly with M. & V. Tank Company, has been added to Mission Sales Company's sales force, located in the East Texas area. Dan Ollre has been transferred from the Houston territory and W. T. Black from the Oklahoma City division to East Texas. T. L. Benson, Mission Sales Company representative at Shreveport, has also been assigned to cover the new East Texas fields.

Products of Mission Sales Company are handled by supply stores throughout the East Texas territory.

Barber-Greene Company, Aurora, Illinois, manufacturers of material handling equipment, announces several changes in the sales organization lineup for 1931.

E. H. Cooper, since 1927 manager at Kansas City, has been appointed ditcher line head for the western division, to operate with J. M. Burns, ditcher line head for the eastern division. Cooper has been with the company since 1925, having spent two years with the organization in Florida. The territory formerly served by Cooper from Kansas City has been divided between Kenny Machinery Company, 2301 Grand Avenue, Kansas City, and Buda Engine Service of 521 West Archer Street, Tulsa.

Two new branch managers are also announced, including Frank Ness, Philadelphia, and D. H. McLean, Cleveland. Ness formerly served the company's Boston office for five years, prior to which he spent eight years in the belting and power transmission industry, including six years with Lewis E. Tracey Company, Boston, and two years with Fairbanks Company, New York City. McLean entered the Detroit office in 1926 after serving several months at the home office.

---

Columbian Steel Tank Company, 1405 West 12th Street, Kansas City, Missouri, is mailing out a 44-page booklet devoted to showing and describing Columbian improved portable bolted steel tanks. The booklet is complete with erection instructions, including actual photographic views of erection during the progress of the jobs. Six pages are devoted to reproducing checking lists on Columbian bolted steel tanks and field prints in the form of line drawings are illustrated in a section devoted to specifications. An interesting page in the book is that carrying a strapping table of Columbian A.P.I. bolted steel tanks carrying sizes from 100 to 27,500-barrel tanks.

Columbian Steel Tank Company will gladly furnish a copy of this interesting booklet upon request to the address given above.

---

Cooper-Bessemer Corporation, Mt. Vernon, Ohio, has added two new Diesel agencies, Pacific Marine Supply Company of Seattle, and Hoffers, Ltd., of Vancouver. The former will serve Washington, Oregon and Alaska, with offices in Portland, Astoria and Kekchiken, Alaska. The latter will act as agents throughout British Columbia and British Yukon.

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General Electric Company, Schenectady, has recently released its thirty-ninth annual report, covering 1930. It is covered in a 28-page booklet, which may be secured upon request.

---

Crescent Tool Company, Jamestown, New York, describes the line of forged Crestoloy steel wrenches, with illustrations, in a leaflet recently printed for direct mailing. This company has spent about three years in experimental work resulting in Crestoloy steel. While the wrench is one-third thinner than the old stype Crescent wrench, the manufacturers explain the design and material in this wrench has resulted in greater strength. Specifications on the new wrenches are carried on the leaflet, giving the catalog number, size, capacity, thickness, weight, and price.

# Manufacturer and Supply Dealer Notes

▼ ▼ ▼

Trumble Gas Trap Company, 756 Subway Terminal building, Los Angeles, has just issued a new catalogue on its regular line of gas and oil separators. This catagogue gives in particular the entire description and detail of the new Kettleman Type Separator.

According to the Trumble authorities, their new Kettleman type separator is one of the most outstanding developments in gas trap construction in recent years.

Copies of this new catalog may be obtained by writing the Trumble headquarters.

---

Edward Valve & Manufacturing Company,, East Chicago, Indiana, shows excellent views of patterns and core boxes for body and bonnet of Edward angle non-return valve with special elbow inlet, the company's eight-inch angle non-return valves, special 16-inch Edward valve at Grand Avenue station of Kansas City Power & Light Company, Kansas City, Missouri, and of Edward 60-degree globe valves on gas header lines in the March, 1931 issue of "Valve Values," a pocket size pamphlet published monthly by this company. The motor operated globe valve of this company is completely described as is other equipment manufactured by the company. A copy of "Valve Values" is available upon request by writing the above office.

---

J. H. McEvoy & Company of Houston and Los Angeles, was awarded a blue ribbon at the recent Oil Equipment and Engineering Exposition at Los Angeles for having a most attractive booth. McEvoy oil well screen and the McEvoy tubing retractor for tubing high pressure wells were the products featuring this interesting exhibit.

---

American Rolling Mill Company, Middletown, Ohio, has recently organized two new departments. A pipe manufacturing department with C. C. Clarke as superintendent, making spiral welded pipe and certain other factory products, will be in Middletown. Since January 1, 1931, Armco's activities in the pipe field have been under the direction of the spiral welded pipe department, (sales division) which has recently been established as a separate department of the sales division. R. C. Beam has been made manager of this department, with H. M. Ives as his assistant.

---

Victor Welding Equipment Company, 844 Folsom Street, San Francisco, and Kimball-Krogh Pump Company, with plants at Los Angeles and San Francisco, have been merged into the Victor Equipment Company. Both concerns will continue to sell under their trade marks and the two original companies will be operated as individual divisions of the new company

The object of this merger is to strengthen the engineering and research facilities; to enlarge the domestic and foreign sales fields; to consolidate and expand warehousing, trucking, and delivery service. A considerable reduction in overhead expense is anticipated because of unified management, co-ordinated advertising, and the utilization of the combined engineering skill of the newly formed company.

Victor Welding Equipment Company is a pioneer in the welding industry and has contributed in a large way in equipment and service to pipe line development and other oil industry work.

Since 1877 pumps of Kimball-Krogh division have been marketed internationally. The total line of Kimball-Krogh pumps includes centrifugal deep well turbines, direct flow deep well turbines, horizontal centrifugals up to 100,000 gallons per minute, booster and circulating pumps, mine unwatering pumps, mine station pumps, tailings and sand pumps, vertical pit and dredge pumps.

Victor Welding Equipment has been a pioneer of a new industry which today has become one of the largest in America and without which the construction of modern pipe lines, construction or dismantling of ships, maitnenance of railroad equipment and tracks, repair of broken machinery, design of modern steel structures, would have been impossible.

Victor Equipment Company will be under the management of the men who have contributed materially to the development of the two companies involved in this merger. L. W. Stettner as president will be assisted by E. L. Mathy as vice-president in charge of sales promotion and advertising, George Pennington as vice-president and general manager of Kimball-Krogh division, Ronald Schlegel as vice-president and assistant to Pennington, and by William Fulwider, secretary, in charge of accounting.

The new company has three factories and three company owned stores and warehouses with complete trucking and installation facilities.

---

Hope Engineering Company, Mt. Vernon, Ohio, has decided to segregate the engineering and construction departments into a separate affiliated company known as Hope Engineers & Contractors, Inc. This move is due to the company's extensive activities in all branches of the oil and gas industry. The new company will allow the widening of the scope of work in construction in the industry. Officers of the new company are as follows: R. S. Lord, president; R. B. Lord, W. B. Jennings and D. W. Paterson, vice presidents; W. P. Lord, treasurer, and T. B. Hall, secretary.

---

Los Angeles Steel Casting Company, Ltd., 2444 South Alameda Street, Los Angeles, manufacturers of Nikeladium alloyed steel, announces three new steels of Nikeladium, known as A1 20, A1 30 and A1 40.

The new steels of Nikeladium are three high grade steels designed to present various combinations of strength and toughness that can be made to fit special conditions of service.

Nikeladium is a special alloy steel with a tensile strength of 100,000 pounds and a yield point of 60,000 pounds. For over two years it has been used in the manufacture of oil tools and oil well equipment.

Additional information on the three new steels and Nikeladium may be obtained by writing Los Angeles Steel Casting Company and asking for a copy of their new folder "Nikeladium and Its Three Partners."

# Squeaks From the Bull Wheel

▼ ▼ ▼

In the smoking room of a club, two business men just past middle age were criticizing the young men of today.

Said one: "Look how reluctant the young men are to marry and settle down."

"That's so," replied the other.

"They seem to fear marriage. Why, before I was married, I didn't know the meaning of fear."

---

"Oh, Mr. Pot, perhaps you can tell me —what does it cost to divorce one husband and marry another?"

"I'm sorry—I don't know the present rate of exchange."

---

Young Lady—I see you advertise "Furs Altered."

Shopman—Yes, miss, that is so.

Young Lady—Very good. I'll send round my squirrel set and have it made into a sealskin.

---

A lady soliciting for a charity fund, approached a Scotchman and handed him a card with the inscription: "Charity Fair —Give Till It Hurts."

The Scotchman read it; then, with tears of grief in his eyes, handed it back to the fair solicitor.

"Lady," he said brokenly, "the verra idea hurts."

Lady, won't you help a poor man that lost his family in the Florida flood and all his money in the Wall Street crash?

Why, you are the same man that lost his family in the Galveston flood and was shell shocked during the war.

Ain't it so, lady? I'm the unluckiest guy in the world.

---

Kelly—Oi want to get a book to put the photygraphs av all me rilatives in. Oi think this wan will do.

Clerk—But that isn't a family album, that is a scrapbook.

Kelly—Thin it's just the thing; all me rilatives are scrappers, ivery wan of them.

---

He—We're coming to a tunnel—are you afraid?

She—Not if you take that cigar out of your mouth.

---

A bishop had been speaking with some feeling about the use of cosmetics by girls.

"The more experience I have of lipstick," he declared warmly, "the more distasteful I find it."

A housewife residing in San Diego, California, recently telephoned to the San Diego Consolidated Gas & Electric Company that one of the wires to her house had broken off and fallen to the street. She wasn't sure whether it was "the wire supplying gas or the one carrying electricity."

---

"What must one do to have beautiful hands?"

"Nothing."

---

Wife (paying a surprise visit to husband in office and clapping her hands over his eyes)—Guess who it is.

Husband—Stop fooling and get on with your work.

---

"Has your son's college education proved of any real value?"

"Yes, indeed. It's entirely cured mother of bragging about him."

---

McDonald—That's a poor blade you've got on your safety razor, Sandy.

MacTavish—Well, it was good enough for my father, and it's good enough for me.

---

Teacher—What is your father's occupation, Jimmy?

Boy—He's a worm imitator.

Teacher—What is that?

Boy—He bores holes in furniture for an antique dealer.

---

"Why do they call it the Chrysler Building, mother?"

The parent, grasping her inquisitive little son's hand more firmly, replied: "Because it is a sort of monument to a wonderful man; a very talented man. Some day, if you're a good boy, I'll take you to see him."

"What does he do, mother?"

"He's a great fiddler, Bobbie," answered the informed parent.

Such is fame.

---

Wife—I was terribly embarrassed at the dance. Your handkerchief hung out from under your coat all evening.

Hubby—Well, set your mind at ease, honey. That wasn't my handkerchief—it was only my shirt tail.—*Life.*

---

"Well, old man, what are you doing these days?"

"I'm selling furniture."

"Are you selling much?"

"Only my own, so far."

---

Magistrate—And now, Murphy, give us your last residence.

Pat—Well, Oi have an idea 'twill be the cimitery.


DRILLER SHOWS OLD TIMER

NEW TRICKS

*with an*

APPLEMAN

**Fireman** (Old-Time Driller): "You boys better go in that hole with a rock bit, 'cause if ya don't yuh gonner have another fishin' job."

**Driller:** "What's th' matter with you, old timer?"

**Fireman (O. T. D.):** "No ord'nary bit's gonna go into that chalk."

**Driller:** "Didja ever use an **APPLEMAN?"**
**Fireman (O. T. D.):** "Naw! Why?"

**Driller:** "Well, wait'll I get in this hole with an **APPLEMAN,** an' I'll show you some ***new tricks!"***

B.K. APPLEMAN
BEAUMONT, TEXAS

# TYLER

Our complete line enables us to supply boiler tubes for every kind and type of service. A warehouse stock in your vicinity will assure immediate delivery.

*Boiler Tubes made of*

COP-R-LOY
ARMCO INGOT IRON
O. H. STEEL

Write us today regarding your requirements—standard or special.

THE TYLER TUBE & PIPE CO.
Washington, Pa.

*Warehouse Stocks at*
The Corbett Corporation
Houston, Texas
Harrisburg Supply Company, Tulsa, Okla.
A. M. Castle & Co., Chicago; Seattle, Wash.
San Francisco, Calif.; Los Angeles, Calif.
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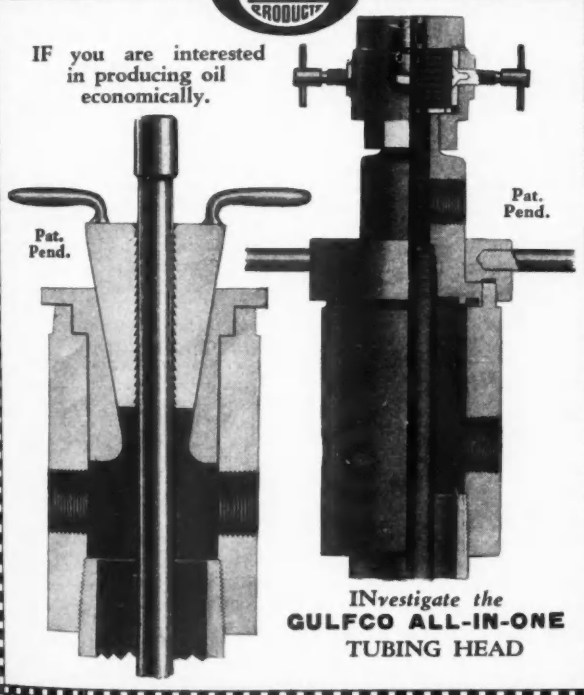
# BOILER TUBES



GULFCO TRADE MARK PRODUCT

IF you are interested in producing oil economically.

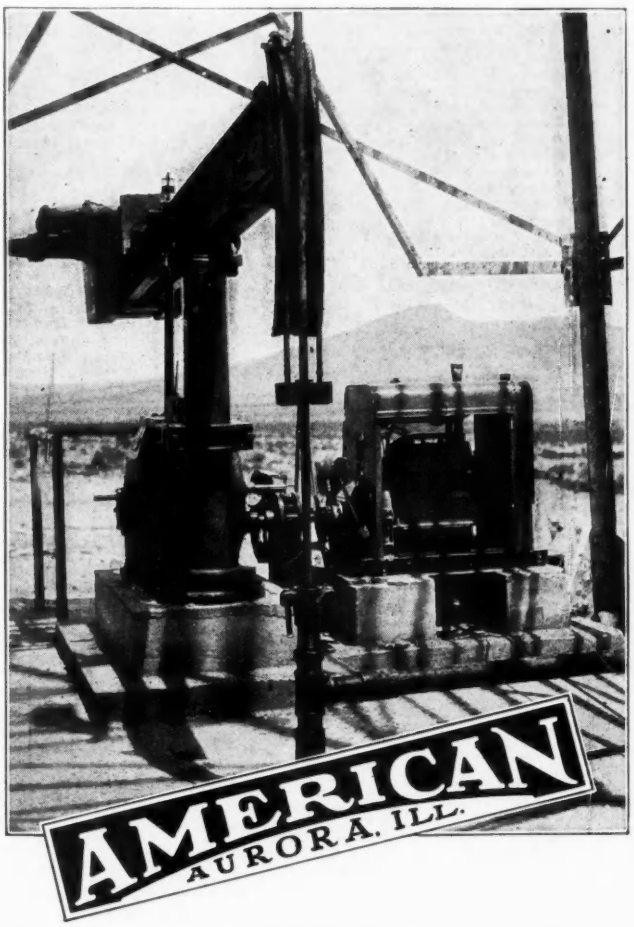



INvestigate the
GULFCO ALL-IN-ONE
TUBING HEAD

GULF COAST MACHINE & SUPPLY COMPANY
BEAUMONT, TEXAS - HOUSTON, TEXAS
P.O.BOX 999 P.O. BOX 1454



# AN "AMERICAN" WITH GAS ENGINE




Pictured is an "American" No. 4-A Fig. 1822 oil well pumping unit direct connected to a gasoline engine.

"American" units have been particularly designed to meet the various drive requirements of different localities. "American" units are adaptable for pulley, V-belt or direct drive by gasoline engine or electric motor.

Detailed figures and engineering data of typical installations of this equipment in both this country and others are available. Ask for them!

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# INDEX TO ADVERTISERS


J. S. Abercrombie Company .....
Acme Fishing Tool Company ..... 98
Ajax Iron Works .....
Alamo Iron Works .....
Allsteel Products Manufacturing Co... 97
Alten's Foundry & Machine Works ..
American Association of Petroleum Geologists ..... 96
American Brake Materials Corp.....
American Cable Company .....
American Hammered Piston Ring Co.
American Iron & Machine Works...
American Meter Company ..... 19
American Roller Bearing Company....
American Rolling Mills Company.....
American Steel & Wire Company....
American Tank & Equipment Corp. ..
The American Well Works .....105
B. K. Appleman .....104
Ash Grove Lime & Portland Cement Company ..... 47
C. L. & W. W. Auer ..... 96
Authorized Appleman Bit Service Co.
Axelson Manufacturing Company ....

Badgett Steam Lubricator Company..
Baker Oil Tools, Incorporated .....
Barber-Greene Company .....40-41
Baroid Sales Company .....
The Barrett Company .....
The Bartlett Hayward Company .....
Beaumont Iron Works .....
Beebe Brothers .....
Bessemer Gas Engine Company .....
Black, Sivalls & Bryson ....Third Cover
Blackor Company .....
The Borden Company .....
Bradford Motor Works .....
The Brewster Company .....
Bridgeport Machine Company .....
T. A. Brown ..... 98
Broderick & Bascom Rope Company..
The Brewster Company .....
Buckeye Traction Ditcher Company ..
J. H. Bunnell & Company.....
Burns Tool Company .....
Butler Manufacturing Company .....
A. M. Byers Company ..... 11
Byron Jackson Company .....

Calmec Manufacturing Company ....
Cameron Iron Works .....
Caterpillar Tractor Company .....
Champion and Barber, Inc. .....
Chain Belt Company .....
Chicago Bridge & Iron Works .....
Clark Brothers Company .....8-9
Clark Machine Company .....
The Continental Supply Company .... 7
Fred E. Cooper Company ..... 18
The Cooper-Bessemer Corporation ...
The Corbett Corporation .....
Cyclone Fence Company .....

Darling Valve & Manufacturing Co. .. 17
E. M. Dart Manufacturing Company.. 95
Dayton Rubber Manufacturing Co.....
Diamond Drill Carbon Company ....
Doheny Stone Drill Company .....
Donovan Boiler Works .....
S. R. Dresser Manufacturing Company
E. I. Dupont de Nemours & Company

The Economy Pump & Oil Tool Co... 93
E. H. Edwards Company ..... 34
Elliott Core Drilling Company .....Front Cover

Fort Worth Laboratories ..... 98
Franklin Valveless Engine Company..
Frick-Reid Supply Corporation.....

Garland Wagon Company ..... 97
Gaso Pump & Burner Manufacturing Company ..... 3
Gates Rubber Company .....
General Electric Company .....
L. H. Gilmer Company .....
Globe Oil Tools Company .....
H. P. Gott Manufacturing Company..
Granger Indicator Company .....
Grant Oil Tool Company .....
Gray Tool Company .....
Greene, Tweed & Company .....
The Guiberson Corporation ..... 58
Gulf Coast Machine & Supply Co. ....105
The Gulf Publishing Company .....
Gulf Refining Company ..... 10
Gulf States Utilities Company ..... 37

Halliburton Oil Well Cementing Co. ..
Hardway & Cathey ..... 98
Hart Brothers Machine Company ....
Haynes Stellite Company .....
Hazard Wire Rope Company ..... 91
C. M. Heeter & Sons Company.....
Hercules Tool Company .....
Hewitt Gutta-Percha Rubber Corp. ..
Heydrick Mapping Company ..... 98
Hinderliter Tool Company .....
Hirsch, Brown & Susman ..... 98
Hopper Machine Works, Inc. .....
The Charles N. Hough Manufacturing Company .....
Houston National Bank .....
Houston Ready-Cut House Company..
Hughes Tool Company ....Fourth Cover
Hyatt Roller Bearing Company .....

Ingersoll-Rand Company .....
The International Derrick & Equipment Company .....
International Harvester Company ....

Byron Jackson Company .....
Jarecki Manufacturing Company ....100
Jenkins Brothers .....
Jensen Brothers Manufacturing Co. ..
Jones & Laughlin Steel Corporation..

Kerotest Manufacturing Company ....
Kirk-Morrow Iron Works Company..

Landis Machine Company .....
Larkin Packer Company .....
The Layne & Bowler Company .....
Layne & Bowler, Inc. .....
A. Leschen & Sons Rope Company....
The Lincoln Electric Company .....
The Linde Air Products Company ..
Link Belt Company .....
Litterst Commercial Photo Company.. 98
Lowell Wrench Company .....
Lufkin Foundry & Machine Company 16

MacClatchie Manufacturing Company..
Maintenance Engineering Corporation
D. S. Mair Machinery Corporation...
Martin Wagon Company ..... 66
McCollum Exploration Company .... 98
J. H. McEvoy & Company .....
Maloney Tank Manufacturing Company
Martin-Decker Corporation .....
Merchant-Thayer & Company .....
Metric Metal Works ..... 19
Miller Sand Pump Company ..... 96
Lee C. Moore & Company .....4-5
I. P. Morris & DeLaVergne, Inc. ....
Multibestos Company .....

National Supply Companies ..... 39
National Tank Company .....
National Transit Pump & Machine Company ..... 45
National Tube Company ..... 49
Naylor Pipe Company .....
Norvell-Wilder Supply Company .....

Oakite Products, Incorporated .....
O'Brien Steel Construction Company..
Oil Center Tool Company .....
The Oil Well Improvement Company
Oil Well Supply Company ..... 22
Oster Manufacturing Company .....

Page Steel & Wire Company.....
Parkersburg Machine Company .....
The Parkersburg Rig & Reel Company 12
Patterson-Ballagh Corporation .....
Petroleum Equipment Company .....
Petroleum Rectifying Company .....
Piccadilly Hotel ..... 94
Pittsburgh Screw & Bolt Corporation..
Pittsburgh Steel Products Company...
Pratt & Whitney Company .....
Pyrene Manufacturing Company ..... 95

J. P. Ratigan .....
Reading Iron Company .....
Regan Forge & Engineering Company
Reed Roller Bit Company .....
Republic Steel Corporation .....Insert
Republic Supply Company .....
Robertson-MacDonald Lumber Co.... 99
Rollway Bearing Company .....

Second National Bank .....
Shaffer Tool Works .....
SKF Industries, Inc. ..... 6
A. O. Smith Corporation .....
Howard Smith Company .....
South Chester Tube Company ..... 13
Spang Chalfant & Company .....
Southern Pacific Lines .....
Specialty Oil Tool Company .....
Spengler Tool Company .....
Sperry-Sun Well Surveying Company
Star Drilling Machine Company ....
Stoody Company .....
Jesse R. Stone ..... 98
Sullivan Machinery Company .....
The Superheater Company .....

Texas Blue Print & Supply Company 98
Texas Cyclone Fence Company .....
Texas Electric Steel Casting Company
Texas Electric Service Co. .....
Texas Iron Works ..... 95
Thermoid Rubber Company .....
The Thrift Corporation .....
The Timken Roller Bearing Company 43
Tretolite Company .....
Trimont Manufacturing Company .... 20
Trumble Gas Trap Company ..... 99
Tyler Chamber of Commerce..... 15
The Tyler Tube & Pipe Company ....105

Union Carbide & Carbon Corporation
Union Wire Rope Corporation .....Second Cover
United Gas Company .....

Vickers Machine Works .....

Westcott Valve Company .....
Walworth Company ..... 14
Wickwire-Spencer Steel Company .....
Wico Electric Company .....
Williams Tool Corporation .....
Williamsport Wire Rope Company....
J. H. Williams & Co.....
Wilson Supply Company .....
W-K-M Company .....
Wright Manufacturing Company .....

Youngstown Sheet & Tube Company..


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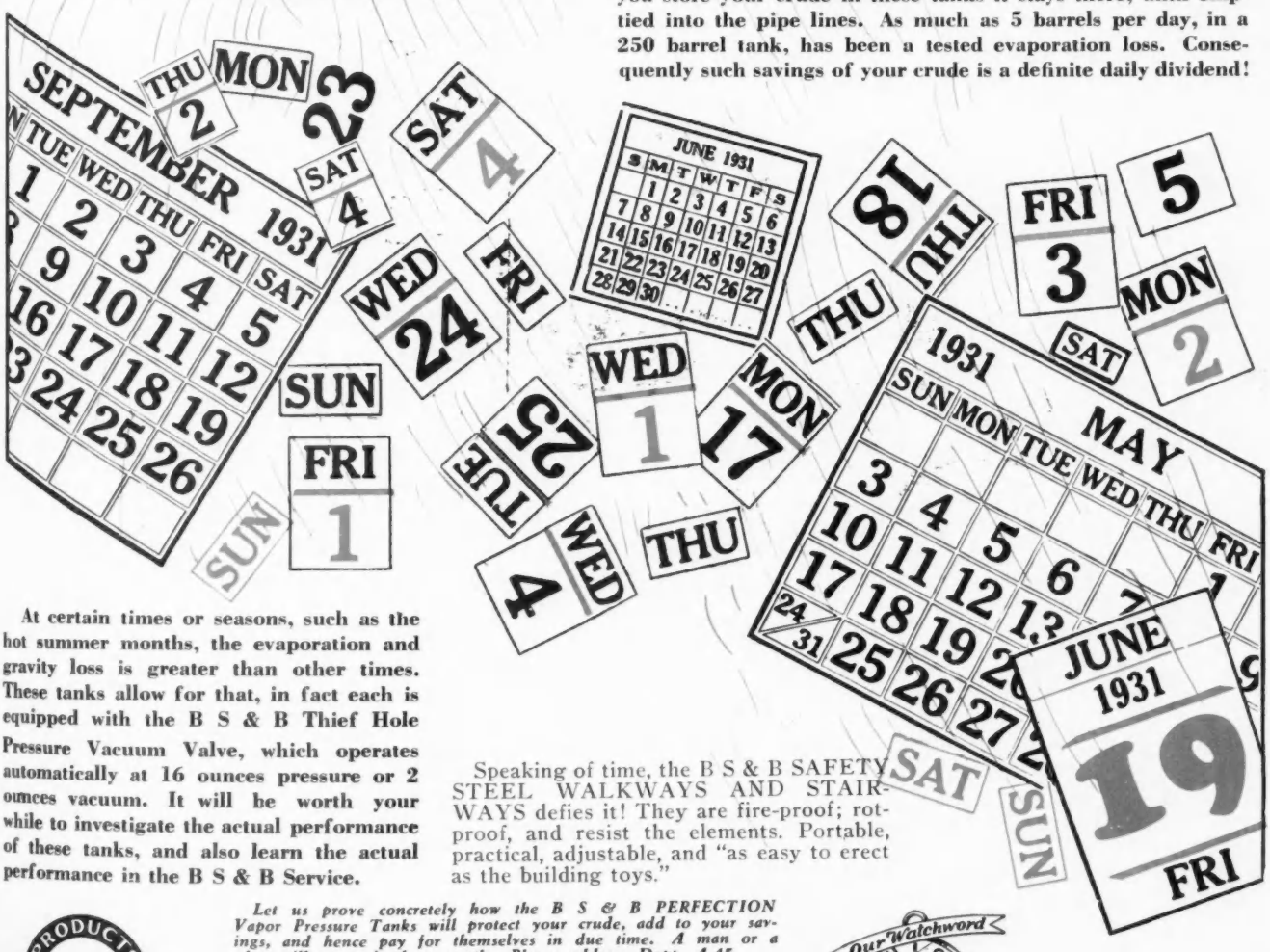
# The Tank That Pays Dividends Daily!

## B.S.&B. Perfection

*Vapor Pressure*

## TANKS

**"A penny saved is a penny earned" is an old adage. When you store your crude in these tanks it stays there, until emptied into the pipe lines. As much as 5 barrels per day, in a 250 barrel tank, has been a tested evaporation loss. Consequently such savings of your crude is a definite daily dividend!**




**At certain times or seasons, such as the hot summer months, the evaporation and gravity loss is greater than other times. These tanks allow for that, in fact each is equipped with the B S & B Thief Hole Pressure Vacuum Valve, which operates automatically at 16 ounces pressure or 2 ounces vacuum. It will be worth your while to investigate the actual performance of these tanks, and also learn the actual performance in the B S & B Service.**

Speaking of time, the B S & B SAFETY STEEL WALKWAYS AND STAIRWAYS defies it! They are fire-proof; rot-proof, and resist the elements. Portable, practical, adjustable, and "as easy to erect as the building toys."

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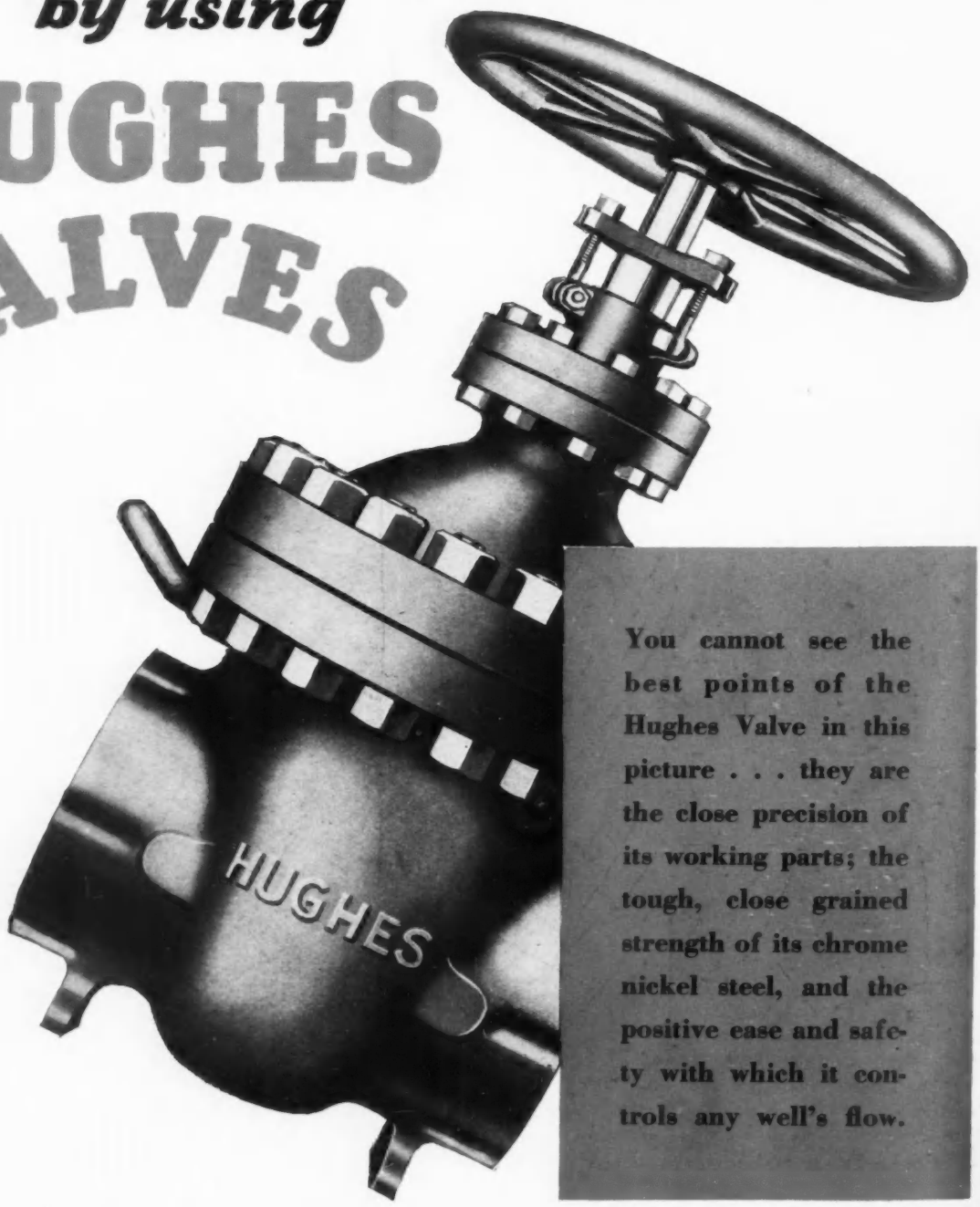
Our Watchword QUICK SERVICE

# It costs a fortune to drill an Oil Well .. protect your Investment *by using*

# HUGHES VALVES




You cannot see the best points of the Hughes Valve in this picture . . . they are the close precision of its working parts; the tough, close grained strength of its chrome nickel steel, and the positive ease and safety with which it controls any well's flow.

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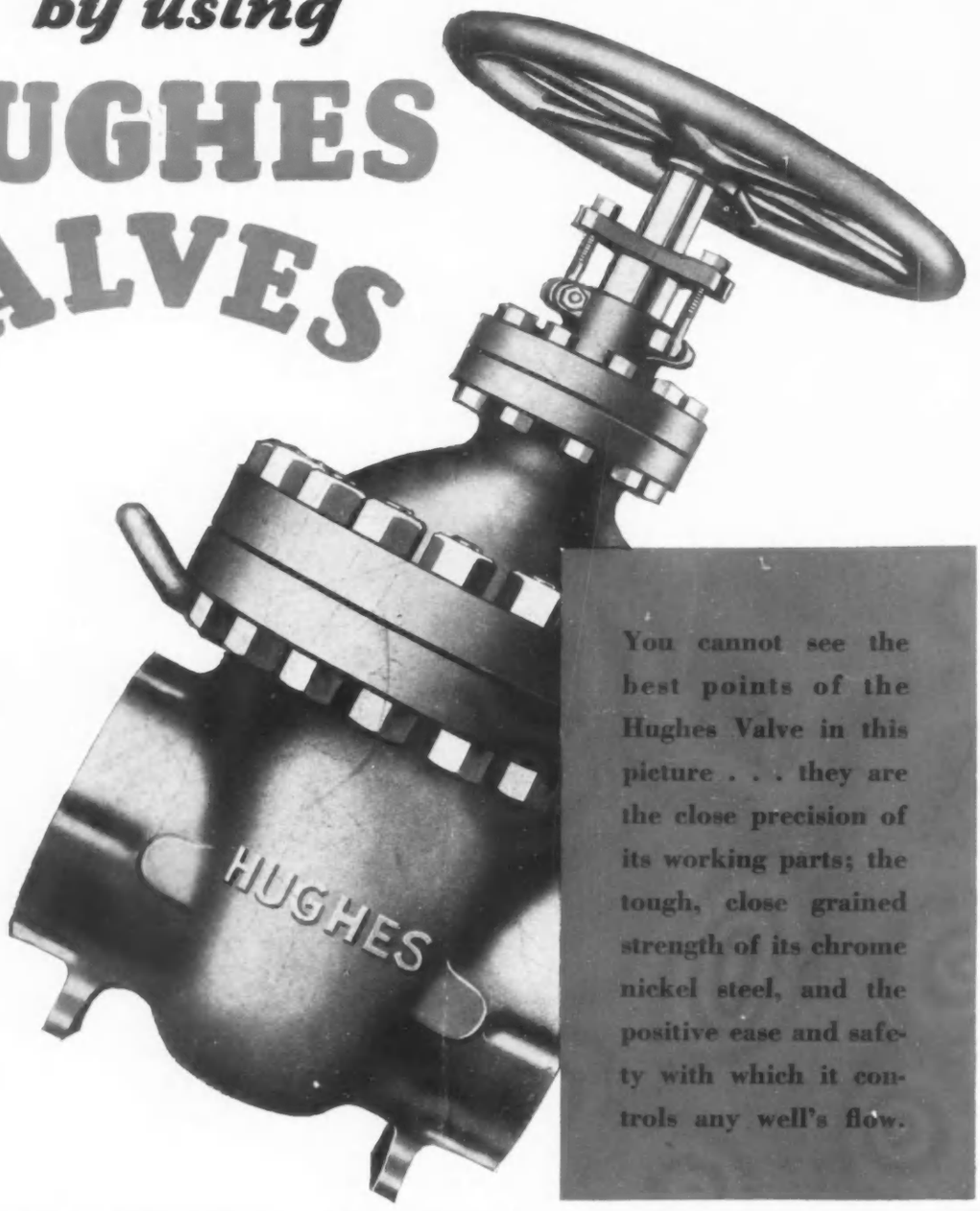


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